# EEI BULLETIN

DECEMBER, 1961


*Page 399* TRANSMISSION — Life Lines of America's Electric Leadership
*Philip A. Fleger*

...ling the Electric Service Bargain *Page 402*

*Page 412* A Total Concept of Area Development
*S. L. Drumm*


PUBLISHED BY EDISON ELECTRIC INSTITUTE

# ELECTRIC UTILITY INDUSTRY Statistics IN THE UNITED STATES

for SEPTEMBER 1961

*Current Statistical Data Covering 100 Percent of Industry*

*(Includes Investor-Owned Companies, Cooperatives, and Government-Owned Utilities)—September, 1961*

| | Contiguous U. S. 1961 | Contiguous U. S. 1960 | % | Alaska and Hawaii, 1961 |
|---|---|---|---|---|
| **SOURCE AND DISPOSAL OF ENERGY** | | | | |
| **NET GENERATION* (Kwhr in Thousands)** | | | | |
| By Fuel Burning Plants | 55,365,757 | 51,141,092 | + 8.3 | |
| By Water Power Plants | 11,931,327 | 11,439,893 | + 4.3 | |
| **Total Net Generation** | **67,297,084** | **62,580,985** | **+ 7.5** | |
| Net Imports from Canada and Mexico | 152,468 | 367,905 | — 58.6 | |
| Purchases from Industrial Sources | 131,777 | 216,802 | — 39.2 | |
| Energy Used by Producer | 268,848 | 673,561‡ | — 60.1 | |
| **Net Energy for Distribution** | **67,312,481** | **62,492,131‡** | **+ 7.7** | |
| Energy Lost and Unaccounted for | 4,189,064 | 3,497,013‡ | + 19.8 | |
| Company Use and Free Service | 170,027 | 175,248‡ | — 3.0 | |
| **Sales to Ultimate Customers** | **62,953,390** | **58,819,870‡** | **+ 7.0** | |
| **CLASSIFICATION OF SALES†** | | | | |
| **NUMBER OF CUSTOMERS—As of September, 1961** | **1961** | **1960‡** | | |
| Residential | 52,106,054 | 51,045,077 | + 2.1 | 176,409 |
| Commercial or Industrial: | | | | |
| Small Light and Power | 6,836,567 | 6,759,992 | + 1.1 | 30,001 |
| Large Light and Power | 519,501 | 458,564 | + 13.3 | 1,466 |
| Other Customers | 199,236 | 206,814 | — 3.7 | 1,070 |
| **Total Ultimate Customers** | **59,661,358** | **58,470,447** | **+ 2.0** | **208,946** |
| **ENERGY SALES—During month of September (Kwhr in Thousands)** | | | | |
| Residential | 17,498,445 | 16,303,243 | + 7.3 | 67,360 |
| Commercial or Industrial: | | | | |
| Small Light and Power | 12,896,915 | 10,860,685 | + 18.7 | 39,151 |
| Large Light and Power | 30,099,680 | 29,423,446 | + 2.3 | 74,769 |
| Street and Highway Lighting | 553,131 | 493,736 | + 12.0 | 2,779 |
| Other Public Authorities | 1,395,670 | 1,348,245 | + 3.5 | 518 |
| Railroads and Railways | 356,342 | 323,183 | + 10.3 | — |
| Interdepartmental | 153,207 | 67,332 | +127.5 | 291 |
| **Total to Ultimate Customers** | **62,953,390** | **58,819,870** | **+ 7.0** | **184,868** |
| **Revenue from Ultimate Customers (Thousands)** | **$1,060,762** | **$996,977** | **+ 6.4** | **$4,859** |
| **RESIDENTIAL SERVICE** | | | | |
| **AVERAGE CUSTOMER DATA—for 12 months ended September 30. (New Series)** | | | | |
| Kilowatt-hours per Customer | 3,970 | 3,811 | + 4.2 | |
| Average Annual Bill | $97.27 | $94.13 | + 3.3 | |
| Revenue per Kilowatt-hour | 2.45¢ | 2.47¢ | — 0.8 | |

| Residential Customers who use nothing but electricity for Space Heating (included in Res.) Data reported to Edison Electric Institute by 98 Operating Companies. | 1961 |
|---|---|
| Customers | 416,452 |
| Kwhr in Thousands (all uses) | 345,914 |
| Revenue in Thousands (all uses) | 3,825 |

* By courtesy of the Federal Power Commission.

† To conform with the new FPC "Uniform System of Accounts," the data reported as "Rural" have been assigned to other appropriate classifications.

‡ Revised to reflect estimates for non-reported data not previously included, and adjustments to earlier estimates.

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he EDISON ELECTRIC INSTITUTE BULLETIN is published thly, except bi-monthly in July August, by the Edison Electric titute, an association of electric t and power companies in the ited States and its territorial essions. Its affiliate members ist of investor-owned electric ities in North, Central and th America and contiguous isds in the Western Hemisphere. he objectives of the Edison ctric Institute are:

he advancement in the public service of the art of producing, transmitting, and distributing electricity and the promotion of scientific research in such field.

The ascertainment and making available to the members and the public of factual information, data, and statistics relating to the electric industry.

To aid its operating company members to generate and sell electric energy at the lowest possible price commensurate with safe and adequate service, giving due regard to the interests of consumer, investor, and employee.

Closing date for the BULLETIN is the tenth of the month preceding the month of issue.

Manuscripts and correspondence relating to the BULLETIN should be addressed to the Editor, Edison Electric Institute, 750 Third Ave., New York 17, N. Y.

The Edison Electric Institute does not assume responsibility for, nor necessarily endorse or approve, statements made by contributors to the BULLETIN.

cription price of the BULLETIN is $3.00 per year in the United States; $4.00 per year in foreign coun- Second-class postage paid at Englewood, N. J. Publication office, 515 East 41st St., Paterson, N. J. Editorial office, 750 Third Ave., New York 17, N. Y.

# CONVENTIONS and MEETINGS

## 1962

### January

10 EEI Home Service Committee, Edgewater Beach Hotel, Chicago, Ill.

11-12 EEI Transmission and Distribution Committee, Jung Hotel, New Orleans, La.

11-13 LBE Women's Conference, Edgewater Beach Hotel, Chicago, Ill.

16-17 EEI Residential Promotion Committee, Airport Hotel, Pittsburgh, Pa.

18 EEI Industrial Relations Committee, Dinkler Plaza Hotel, Atlanta, Ga.

21-24 National Association of Electric Distributors Southern Regional Meeting, Palm Beach Biltmore, Palm Beach, Fla.

24-25 Southeastern Electric Exchange Legal and Claims Committee, Roosevelt Hotel, New Orleans, La.

25-26 EEI Commercial Cooking and Water Heating Committee, Williamsburg, Va.

25-26 PEA Communications Committee Meeting, Bellevue-Stratford Hotel, Philadelphia, Pa.

28-Feb. 2 AIEE Winter General Meeting, New York City, N. Y.

29 LBE Policy Committee, EEI Headquarters, New York City, N. Y.

31-Feb. 2 EEI Electric Space Heating and Air Conditioning Committee, Birmingham, Ala.

31-Feb. 2 EEI-AGA Taxation Accounting Committees, Atlanta Biltmore, Atlanta, Ga.

### February

5 IEC Executive Committee, Cincinnati, Ohio.

5- 7 EEI Prime Movers Committee, Lord Baltimore Hotel, Baltimore, Md.

5- 8 IEC Heating Conference, Netherland Hilton Hotel, Cincinnati, Ohio.

5- 8 National Industrial Electric Heating Conference, The Netherland Hilton Hotel, Cincinnati, Ohio

5- 9 ASTM Committee Week, Statler Hilton Hotel, Dallas, Texas

6 BLBS Executive Committee, United Engineering Center, New York City, N. Y.

6- 8 EEI Commercial Lighting Committee, Atlanta, Ga.

8- 9 EEI Industrial Power and Heating Group, Cincinnati, Ohio.

8- 9 EEI-AGA Accounting Conference Final Working Meeting, Sheraton Cleveland Hotel, Cleveland, Ohio

8- 9 PEA Relay Committee Meeting, Bellevue-Stratford Hotel, Philadelphia, Pa.

11-17 National Electrical Week

12-13 EEI Electrical System and Equipment Committee, Grand Hotel, Point Clear, Ala.

15-16 Missouri Valley Electric Association-Industrial and Commercial Sales Conference, President Hotel, Kansas City, Mo.

22-23 Southeastern Electric Exchange Accident Prevention Committee, San Carlos Hotel, Pensacola, Fla.

26-27 PCEA Business Development Section, Huntington-Sheraton Hotel, Pasadena, Calif.

### March

12-14 EEI Meter and Service Committee, Statler Hilton Hotel, Detroit, Mich.

15-16 EEI Industrial Relations Committee, Mayflower Hotel, Washington, D. C.

22-23 PCEA Engineering and Operating Section, Sheraton-Palace Hotel, San Francisco, Calif.

26-27 PCEA Administrative Services Section, Villa Hotel, San Mateo, Calif.

26-28 Southeastern Electric Exchange 29th Annual Conference, Boca Raton Hotel and Club, Boca Raton, Fla.

27-29 American Power Conference, Sherman Hotel, Chicago, Ill.

### April

1- 4 EEI-AGA National Conference of Electric and Gas Utility Accountants, Bellevue-Stratford Hotel, Philadelphia, Pa.

2 EEI Street and Highway Lighting Committee, Chicago, Ill.

2- 4 EEI 28th Annual Sales Conference, Edgewater Beach Hotel, Chicago, Ill.

2- 4 National Conference of Electric and Gas Utility Accountants, Bellevue-Stratford Hotel, Philadelphia, Pa.

2- 5 EEI-AGA 21st Annual Conference on Operation of Public Utility Motor Vehicles, St. Francis Hotel, San Francisco, Calif.

11-13 Missouri Valley Electric Association Engineering Conference, Muehlebach Hotel, Kansas City, Mo.

12-13 Southeastern Electric Exchange Engineering and Operation Section Conference, Atlanta Biltmore Hotel, Atlanta, Ga.

15-17 Rocky Mountain Electric League Spring Conference, Harvest House, Boulder, Colo.

24-27 EEI Hydraulic Power Committee, Tutwiler Hotel, Birmingham, Ala.

26-27 EEI Industrial Relations Committee joint with Personnel Committee of PEA, Industrial Relations Committee of Ohio Electric Utility Institute and Indiana Personnel Group, Netherland-Hilton Hotel, Cincinnati, Ohio.

### May

2- 3 Indiana Electric Association Young Men's Utility Conference, Evansville, Ind.

2- 4 NELPA Engineering and Operation Section joint with Personnel and Safety Section and Purchasing Committee, Davenport Hotel, Spokane, Wash.

3- 4 Southeastern Electric Exchange Personnel Administration Committee, DeSoto Hotel, Savannah, Ga.

7- 9 EEI Purchasing and Stores Annual Meeting, The Shoreham Hotel, Washington, D. C.

10-11 EEI Statistical Committee Meeting, Marriott Hotel, Philadelphia. Pa.

12-16 National Association of Electrical Distributors Convention, Pittsburgh, Pa.

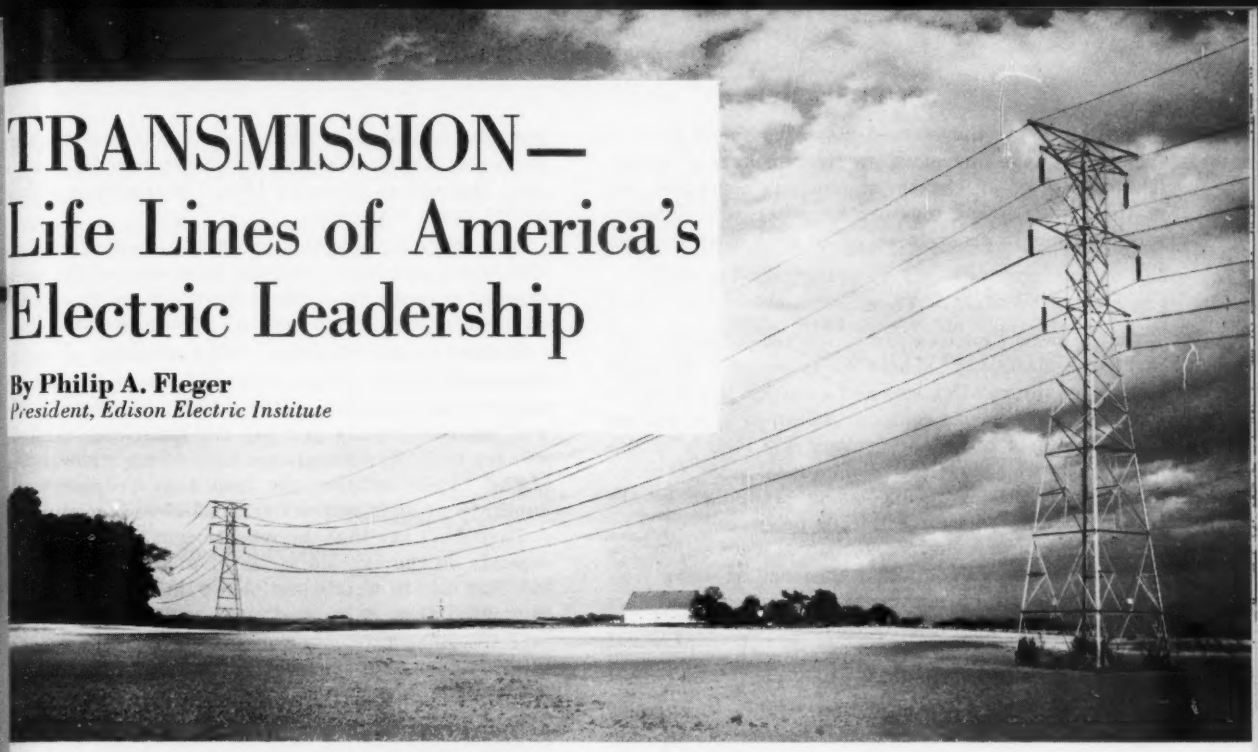
14-16 EEI Accident Prevention Committee, Hotel Skirvin, Oklahoma City, Okla.

16-18 PCEA Annual Convention, Ambassador Hotel, Los Angeles, Calif.

27-29 Wisconsin Utilities Association Accounting Conference, Lake Lawn Lodge, Delavan, Wis.

# TRANSMISSION— Life Lines of America's Electric Leadership

**By Philip A. Fleger**
*President, Edison Electric Institute*



AMERICA'S electric power transmission system, from a technical point of view, is one of the most fascinating areas in the power business these days. Certainly some of the most interesting research being done in the industry deals with extra high voltages and related problems. But I would like to focus on another aspect: the growth of interconnection and pooling, and their importance to the continued strength of our industry and our nation.

This country holds an undisputed position of world leadership in electric power. We produce more power in a year than the next six countries combined, and three times as much as Soviet Russia, which is closest to us in total production. With only about 1/16 of the world's population, we have about 1/3 of the world's total power-producing capacity.

Our transmission system is unrivaled anywhere. By the end of last year we had well over 312,000 miles of transmission lines of 35,000 volts and above. The Soviet Union, on the other hand, which has two-and-a-half times our land area, has only about 71,000 miles of comparable lines.

In this country, nearly all the electric power systems east of the Rockies are now interconnected. West of the Rockies, interconnected operation has been a fact for several years—both in the Pacific Northwest and the Pacific Southwest. Compare this situation with that in the Soviet Union. There, the power networks and power systems cover only about one-fifth of the populated territory of the country.

Think of that vast nation—Soviet Russia—playing the bully before the world, seemingly ready to hurl rockets, bombs, and missiles, and having declared economic war on us—with only a small portion of her land electrified. It is no wonder that the president of the Soviet Academy of Science has given electrification of the country number one priority for Russian science. Even rocket research has been put farther down the list.

Most Americans have difficulty picturing the realities of life in other countries. We forget that, in many ways, the Russian peasant in Siberia, the half-starved farmer in China, the African, the Indian—in fact, most of the earth's population—are living in a different time. They stand on the threshold of the industrial era while we enjoy the fruits of the electrical age.

### Door Opened to a New World

When Thomas Edison demonstrated his incandescent lamp in October of 1879, he opened the door to a new world. But it was two months later, on December 31, that he crossed the threshold. That was the day he first demonstrated a complete central station system, lighting a section of Menlo Park. This supplied the missing life line between the bulb and the generator—transmission.

For the past 82 years our companies have been generating electricity and taking it to where people can use it. They began as a handful of tiny central stations, each serving its own area. Naturally, the first areas they served were those most densely populated. But, step by step, service was carried to the most sparsely populated areas until, in a relatively short time, electricity became available throughout the land.

As part of the process, the central stations began to consolidate. What economics demanded, technical advances made possible. Alternating current transmission allowed central stations to be located away from the

An address before the Electric Council of New England, Boston, Mass., Oct. 19, 1961.

immediate areas they served. Research found ways to increase voltage and move greater amounts of power. The concept of an electric system was developed, and stations were linked together by a network of transmission lines in order to serve an area more economically.

### Sales—Then and Now

At the same time, companies worked to create a demand for electricity. Where today we sell Medallion Homes by the subdivision, and even by the town, in the early days power company salesmen took electric irons from door to door to demonstrate their effectiveness. Today we sell electricity on a mass scale, through national advertising media—as is carried on by the Institute's Live Better Electrically program—but from the very beginning electric companies were selling the convenience and economy and efficiency of using electricity. Their sales programs played an important part in creating and maintaining the economic advantages of high load factor and wide diversity—those two vital elements in central station operation.

All during this early period, small electric systems continued to merge and combine their properties, finally forming the corporate boundaries of the companies we know today. In the 1920's a further development began. Many companies, finding they needed to evolve ways to meet their growing load requirements, began a process of interconnection. The Connecticut Valley Power Exchange, formed in 1925, was one of the earliest.

In many areas, the next step has been the formation of power pools. Across the country, the degree of coordination within these pools, their size and their form of organization have been dictated by the load requirements and the economic characteristics of the areas served. The pooling of the New England companies provides an example of the process which has made it possible to maintain corporate identity and diverse ownership of facilities, and, at the same time, coordinate power supply.

Now, you and I are aware of the advantages of interconnection and pooling. We know they increase the reliability of our service through the exchange of energy in emergencies. We know the economies they can bring through fuller use of our larger and more efficient generating units and through the reduction of reserve requirements. We know the part they have played in helping electric companies hold down the price of power during the past 20 years—while the cost of living has been skyrocketing.

The degree of interconnection our companies have achieved in the past, and the plans we are making for further interconnections in the future, are clear proof of our industry's awareness of these facts. As a result, we have come a very long way along the path to complete interconnection in a very short time.

For some reason, though, we haven't been telling the public about the progress we have made.

One reason may be that we have thought the subject was too technical to talk about outside our industry—that people would find it dull. But surveys show the public thinks pooling and interconnections are a good idea and an appealing idea. The trouble is, almost no one knows they exist.

Into this situation, this vacuum of public ignorance that is our own responsibility, have stepped the advocates of government power—offering to build a Federally owned, nationwide network of transmission lines.

"Listen to us," they say. "We can create an interconnected system of transmission lines that will move power from one part of the country to another. We will reduce the price you pay for electricity. And we will see to it that you always have enough power."

They don't say that the lines they propose would duplicate present systems or ones already planned.

They don't say that the reduction in price they offer depends on the old, old tactic of giving electricity at less than cost to certain sections of the country through exemption from taxes and the loan of money at less than the going rate, while the rest of the country pays the difference.

Above all, they don't say that investor-owned electric companies are already planning and building the generating plants and transmission lines needed to supply an abundance of electric power in the future. They ignore the pledge which our industry has repeatedly given: that all the power needs of the American people can be financed in the free market.

Of course they don't say these things. But why don't we?

There is a good deal more at stake here than our own interests—important as they are to us. As a nation, we appear to be facing a long, hard fight with international communism in which our government will need huge sums for defense.

At a recent press conference, President Kennedy said the world is in "a period of maximum hazard," and that hopes for a $3 billion surplus this year—and for a tax cut—had been wiped out because of steps to strengthen national defense. He said there could be further unexpected defense spending.

### In National Interest

Surely, it is in the national interest to point out that between 1960 and 1970 over $50 billion for construction of electric power systems will come from the operation of investor-owned companies working in a free enterprise economy, and that some $8 billion of this total will be directed to the construction of transmission lines. This is a burden government need not and should not bear. This is a burden the American taxpayer need not and should not bear.

Not only that, but over the next decade investor-owned electric companies will contribute over $36 billion in taxes to Federal, state, and local governments —more than half of this total to the Federal government. Even in the stratosphere of Federal governmental finance these are very large sums.

I saw a statistic several months ago that appalled me. It was a simple one: the interest on the U.S. national debt amounts to more than one million dollars

an *hour*. Yes, our inability to comprehend the genuine magnitude of the millions and the billions our government spends may have more influence on irresponsible government spending than we realize.

How many people do you suppose understand that government-in-the-power-business now represents an investment of about $5½ billion in Federal projects alone? How many people know that there are plans for spending some $10 billion more? These are funds that are vitally needed for our national defense and for other legitimate government activities. Government-in-the-power-business is draining tax money away from these areas. And this is all the more serious because government expenditures are totally wasted in the power field. They are not necessary at all.

### One Simple Question

It takes just one simple question to cut through the welter of conflicting statements that is quickly built up around any proposed Federal power project: "Can these power facilities be financed in the free market?" If the answer is "yes," then the answer to government financing (which means taxpayer financing) must be "no."

During the past 20 years we have made progress in getting the American people to understand this view. Twenty years ago, according to surveys, 55 percent of the public favored government ownership of electric utilities. Today that figure has dropped to 38 percent. By any standards, that's a substantial gain.

But during the past year the advocates of government power have been intensifying their efforts. More and more, during the past weeks, we have heard them arguing for their national transmission grid. The best answer is to tell our story louder and clearer and more often than ever before.

The story we have is a good one. Let's review it for a moment.

Our companies are planning today for the power needs of 1970, 1980, and even for the year 2000. During the 60's and 70's we will be nearly quadrupling our power-producing capacity. In order to get this power to the people we will be adding to our network of transmission lines: building new lines where they are needed and strengthening lines that already exist.

More than two years ago, a task force made up of men from our companies began an extensive study of the plans individual companies were making. Last month the Institute announced their findings. The study shows that our companies are planning to build some 100,000 additional miles of transmission lines by 1970. And by 1970, we expect all the major power systems throughout the United States to be capable of operating on an interconnected basis.

The New England companies have announced plans for a $100 million transmission line construction program. This is the kind of story we should be telling more loudly. It is positive. It is forward-looking. And it clearly shows that government intervention in the power business is unnecessary.

There are stories like it to tell all over the country. Here are a few examples:

In New Jersey, the Public Service Electric and Gas Co. has made public plans for spending $145 million on transmission lines over the next 10 years.

Virginia Electric Power Co., Carolina Power and Light Co., South Carolina Electric and Gas Co., and Duke Power Co. have announced their intention of coordinating and pooling their power production and transmission facilities.

Texas Power & Light Co. and three other Texas utilities are planning a 345,000-volt "power highway" that will link together 6,500,000 kilowatts of generating capability in the four companies.

A group of companies in eight Midwest and Southwest states are building a "super power grid" involving at least 4000 miles of 345,000-volt and 230,000-volt lines.

The list could go on and on. New power pools are being formed. Old, informal arrangements are being expanded. Lines are being built at higher and higher voltages: 345,000 volts is no longer unusual. Power is being transmitted, on a regular basis, at 460,000 volts. And experimentally, voltages of 500,000, 770,000 and 775,000 have been achieved.

Some of the instances I have mentioned may seem far off. Geographically, Texas is miles from Boston. But to the government power advocate, all lines feed through Washington; and events along the Colorado River will be reflected on the banks of the Charles.

Make no mistake about it. We are all in this together. A Colorado River Storage Project, an inter-tie from Bonneville to Los Angeles, a generating and transmission co-op in Indiana—these are not local battles. They are skirmishes in a mammoth struggle that threatens every part of our industry. We, here in the East, must fight for our friends in the West, or the problems they face will soon be at our own doorsteps.

### What Can We Do?

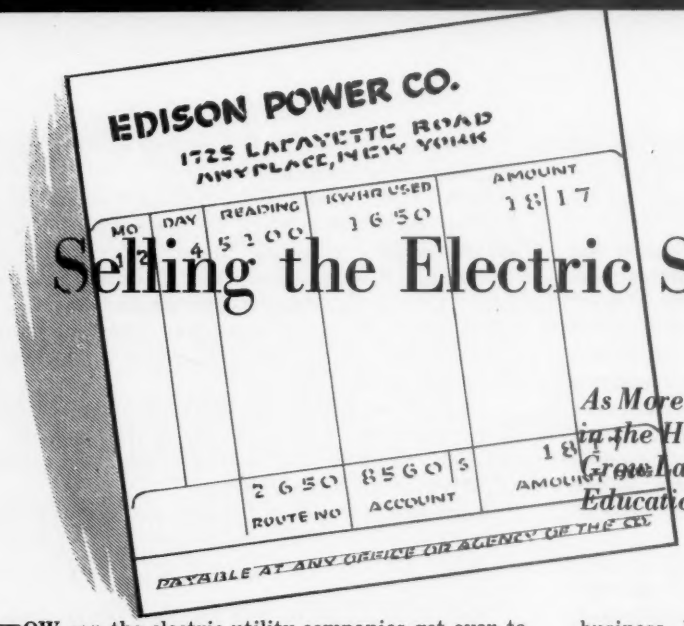
The question is—what can we do?

First and foremost, we must continue the performance that has established our position of world leadership in electric power. We must continue to sell electrical living and we must continue to build to take care of the demand we create. We must serve the American people as we have been serving them for the past 80 years.

Second, and equally important, we must convince the American people that we built America's electric leadership and that we are the best qualified to advance it. We must convince our fellow citizens that we are ready, willing, and able to supply all the power needs of the nation. We must show them there is no need for a Federal transmission grid. We must show them that there is no need for government intervention in the power business.

We must tell our customers what we are doing as companies. But this is not enough. We also must tell

*(Continued on page 417)*




# Selling the Electric Service Bargain

## *As More and More Appliances Are Added in the Home, and Electric Bills Inevitably Grow Larger, Customers Require More Education on the Value of Service*

HOW can the electric utility companies get over to the large-use residential customers the fact that they are buying and using a lot of valuable service at a very reasonable cost?

This very important sales and public relations problem was the subject of a two-part discussion at the 1961 Public Information Program (PIP) Workshop by John Dierdorff, Vice President, Pacific Power & Light Co., and A. J. McCollum, Manager of the Advertising and Publicity Department, Pacific Gas and Electric Co.

Bills, inevitably, are becoming bigger and bigger as the American family adds more and more electrical appliances. Today the bill of the average-use customer on the Pacific Power & Light Co.'s system is larger than that of the large-use customer a few years ago.

Because the customer often does not recognize that the gradual addition of appliances has resulted in bigger bills, his attitude toward the cost of service may become critical. Pacific Gas and Electric and Pacific Power & Light are seeking a way to educate the customers in the mass, and explain the importance of service before complaints arise.

At the PIP Workshop, Sept. 20-22, in Denver, Colo., Mr. Dierdorff addressed his remarks mainly to internal courses of action, while Mr. McCollum was concerned with external approaches to the problem.

Excerpts from the remarks of Messrs. Dierdorff and McCollum follow.

### *Mr. Dierdorff's Remarks*

Convincing the large-use customer that he is buying and using a lot of valuable service at a very reasonable cost is a never-ending task. We should accept it as a natural and constant companion of the industry's growth and sales progress.

The large-use customer of today will be a larger-use customer tomorrow. Today's low-use customer is continuously the target of advertising and sales programs which, if effective, will move him from the low-use bracket into the high-use bracket.

We want our customers to use all the electricity they can put to work effectively in their homes or places of business. We want today's large-use customer to be such an enthusiastic booster of our service that he will be joined by many others.

There was a time on our system when the large-use customer was our most enthusiastic booster. That was a number of years ago, when a large residential bill ran around eight or nine dollars a month. Today the *average* bill on our system is larger than that. In the past 10 years alone our average residential bill has increased by two-thirds, and only a fractional part of this can in any way be attributed to rate changes. In the same period, average residential kilowatt-hour use has doubled.

A customer can easily forget that there was a week of real cold weather during the first part of his meter reading period, or that his air conditioner was going 24 hours a day when that hot spell occurred. A Bozell and Jacobs survey brought out very clearly that these are the kinds of thing that result in large bill inquiries.

Central Surveys has found that relatively few customers who are critical of the cost of electricity attribute the size of their bill to the amount of their own usage. In one study, they found that less than one critical customer in four blamed his own large use of electricity for his large bill. Thus it is evident that any steps we can take to enable the large-use customer to rationalize the amount of his bill may reasonably be depended upon to result in improved customer attitudes. This is emphasized by a consistent finding in our area that customers who heat their homes electrically, and who naturally have substantial bills, are somewhat less inclined to be critical of the cost of electricity than large-use customers who do not have electric heating. The typical response of an electric heating customer may be that his bill is pretty big, but adding: "Of course, I heat my house electrically, and everything else in it is electric."

Other survey results indicate quite clearly that it has been difficult for the customer to recognize how much his actual use of electricity has been increasing. This increase in use, for the most part, has resulted from the gradual addition of appliances.

McCann-Erickson, the advertising agency, asked a group of customers who use 15,000 to 20,000 kilowatt-hours a year—four to five times the national average—this question: "Would you say that you are using more, or less, or about the same amount of electricity as most people in this community?"

The answers to this question were startling. Seventy percent of these large-use customers either thought they were using the same amount or less electricity than others in the community! Yet, here was a group representing the top 20 to 30 percent of all our customers.

Once we woke up to this very significant fact, it was easy to understand a lot of things. A customer with a $20-a-month bill who considers himself just an average user can hardly be expected to understand why his truly "average" neighbor down the street has a bill of only $12 a month.

As a result of this finding, we now propose to build into our testimonial ads a little chart which shows how many hours per month Reddy Kilowatt works in the average U.S. home, in the average home on our system, and in the home of the large-use customer who is giving the testimonial.

We and many other companies have long been sold on the merits of giving customers an analysis of their bills in the course of sales calls, to the extent that customer coverage can be obtained with a relatively small force. This is another of the things confirmed in the Bozell and Jacobs survey. A personal call and bill analysis discussion is, in the light of our own experience, the most effective thing one can do to gain customer understanding of the value of service and all that goes with it. But it simply isn't practicable to get system-wide coverage of customers with such calls. It would take too long, and be too costly.

The preparation of bill analysis forms used to be a laborious process. Either a clerk in the field office or the salesman himself had to glean the material from customer records, and usually write the figures down in long-hand on the analysis form. Now, however, many companies having electronic data processing equipment can quickly turn out a 12-month bill analysis, showing such breakdowns as kilowatt-hour use month by month, the amount of the monthly bill, amount of the annual bill and the total annual use, and the average price paid per kilowatt-hour. The form we use for our bill analysis calls is basically similar to forms used by many other companies and includes an appliance check list and space for comments on the carbon copy, which the salesman turns in at the end of the day. Except for the fact that we produce such forms on EDP, I don't believe there is much new about our bill analysis procedures, but we have tried one new little stunt.

In the spring of 1960 our company had its first rate increase in 50 years in its Oregon division. Last fall, as the heating season approached, we began to explore ways in which we might minimize large bill complaints, particularly from heating customers. We found that EDP could fill in a comparative kilowatt-hour use card which could be put in an envelope with the bills to customers whose November bill was $15 or more, and whose use for that month was 25 percent or more above the preceding month. We assumed that most of the bills falling within this specification would be for customers who have electric heating, either as the major or auxiliary source of heat.

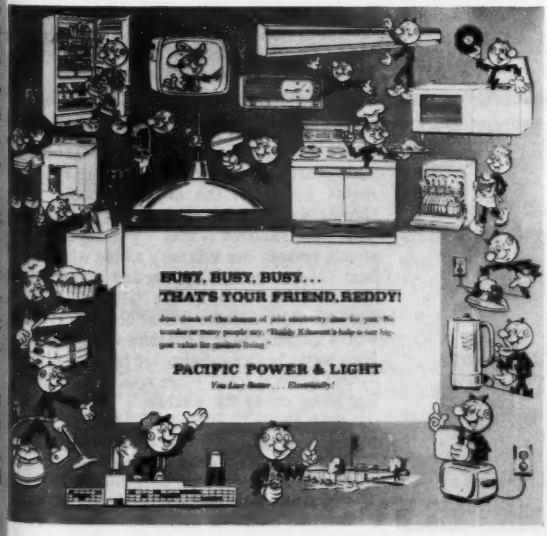
The principal novelty about this card was that it gave the customer a comparative kilowatt-hour reference point against which to relate the size of his bill. It talks of electricity used instead of money billed.

Lists of the 25,000 customers who received this card

"Living's more fun when you use electricity in as many ways as we do"
Here's what PP&L customer Mrs. William A. Gilmore says about electric living...
"It's wonderful to be able to depend on electricity for so many different things. We keep our electric appliances busy doing everything from laundry and dishwashing to freezing ice cream. My whole family appreciates the big value we get with electric service."
Like thousands of other Pacific Power & Light customers, Mrs. Gilmore and her family live better because they make generous and effective use of modern electric service.
How about you—are you making full use of Reddy Kilowatt's helpful service?
PACIFIC POWER & LIGHT COMPANY
You Live Better... Electrically!
63 ELECTRIC APPLIANCES
Here's what electricity does for the Gilmore family:
How many of these appliance work for you in your home?

A check list of electrical appliances, used by Pacific Power & Light Co. in its advertising program, reminds the customers of the many uses of electricity in the home, and helps them to understand electric service is one of their best bargains.

This Reddy Kilowatt ad, also used by Pacific Power & Light Co., shows at a glance the dozens of jobs electricity does for the customer. This was one of PP&L's best-received ads.



Dear Customer:

We were interested to note that in the past month you made use of KWH of electricity compared with KWH in the previous month.

It is normal for the use of electricity to increase at this season, when days are getting shorter and chilly weather is coming along, and you probably know why you've had Reddy Kilowatt do more work for you in the past few weeks. However, we thought we should mention the larger use just in case you have any questions about it.

Please feel free to call us at any time. We appreciate your business and want to be sure your service is entirely satisfactory.

Sincerely yours,

PACIFIC POWER & LIGHT COMPANY

The card, at left, is sent to customers of Pacific Power & Light Co. with the first higher-than-normal fall bill. It is felt that such a reminder that the customer has been using more electricity will head off complaints about increase in size of bills.

were supplied to our district offices so they would know which customers were going to note a substantial increase in their service bills as compared with the preceding month. In a number of cases, this list was used as the basis of scheduling calls on customers whose particular use might suggest the desirability of a personal visit.

Our people in the field said without exception that it produced a very good reaction and they felt it was tremendously helpful in dealing with the large bill problem.

It was necessary to arrange specially for envelope bill mailing for these cards a year ago. Since then we have decided to abandon postcard billing, and within the next month we will be sending all bills in envelopes. A return envelope will be enclosed for the customer's convenience, and we are reviving a customer house organ to go out each month with the service bills at no additional postage cost.

In the light of our latest survey findings, which show how few large-use customers understand they are in that bracket, we are busy pursuing plans for another EDP mailing piece which would go to all large-use customers. This essentially would be a direct-by-mail bill analysis, especially designed to carry a self-contained story. It would be produced by EDP and sent to customers with a short transmittal note, probably signed personally by the district managers. The transmittal note will recognize their large use of our service, express our appreciation of their business and affirm our desire to be of service to them in any way possible.

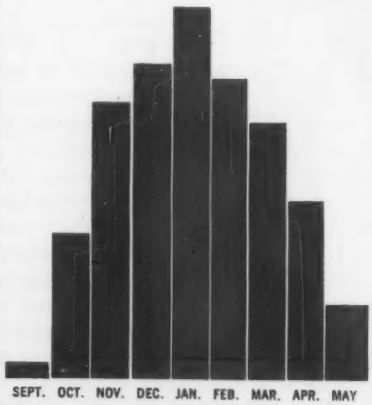
We have determined that such a project is entirely feasible with the EDP equipment that we have available. The principal reason we do not have the mailing form now ready for final approval is that we are seeking to build into it the benefit of the lessons we learned from our most recent advertising tests. I personally am convinced that a mailing piece of this character, backed by effective advertising, can go a long way toward getting an answer to the large-use customer's cost attitude problem.

The Bozell and Jacobs report makes it clear that the great majority of the 46 companies replying to its questionnaire place stress on the importance of adequate employee training if we are to convert large-bill complaint liabilities into public relations assets.

Another observation is that a good many of the companies are endeavoring to anticipate high bill complaints, either in individual cases or in the mass, by seasonal advertising or other methods. The most interesting, in a way, was the comment by one company that its meter readers were trained to note unusual

The reverse side of the card explaining why the bill is bigger than normal carries an easy-to-understand chart showing typical heat requirements by months. It points out that heating requirements go up as days get cooler and longer, and that peaks usually are reached in January.

TYPICAL HEAT REQUIREMENTS BY MONTHS




This chart shows how house heating requirements go up as the days get cooler and shorter, and usually reach a peak in January. The exact pattern varies by localities and winter seasons but it is easy to see why more heat (and more fuel) is needed for comfort in midwinter than in the fall and spring. During cold months your heating system works harder—water is colder when it enters your water heater—lights are burning longer—and often there is more roasting and baking going on in the kitchen.

Whatever fuel you use for heating, remember that proper insulation and weather stripping help keep the heat inside where you want it, and cut down your heating costs.

increases in kilowatt-hour use as they went their rounds, and to mention the increase to the customer. If there were a lot of diapers on the clothes line, the meter reader might ask if there was a new baby in the house, or otherwise inquire about a logical reason for the increased use.

Tailor your plans to your own problem! And find out as definitively as you can the nature and dimensions of your particular problem before you jump to any conclusions about it.

Customer surveys will do a big part of the job for you. Advertising field tests will tell you whether or not you are getting across the idea you need to get across. They are not expensive, in the first place, and they can save you money by increasing the efficiency of your advertising expenditures and reducing your company's friction losses.

Furthermore, it's comforting sometimes to have solid scientific evidence to back up your own confidence in the program you are carrying out.

## *Mr. McCollum's Remarks*

Handling big bill complaints one by one—or hundred by hundred—is tedious and expensive therapy for a chronic ailment. The known treatments are essentially palliatives and are not remedial. Nor are we really seeking a wonder drug to eliminate the cause. Rather, we are doing our level best to aggravate it. Our aggressive sales promotion programs are bent on building more load—therefore bigger bills, and, inevitably, more complaints.

That is, unless we can head them off.

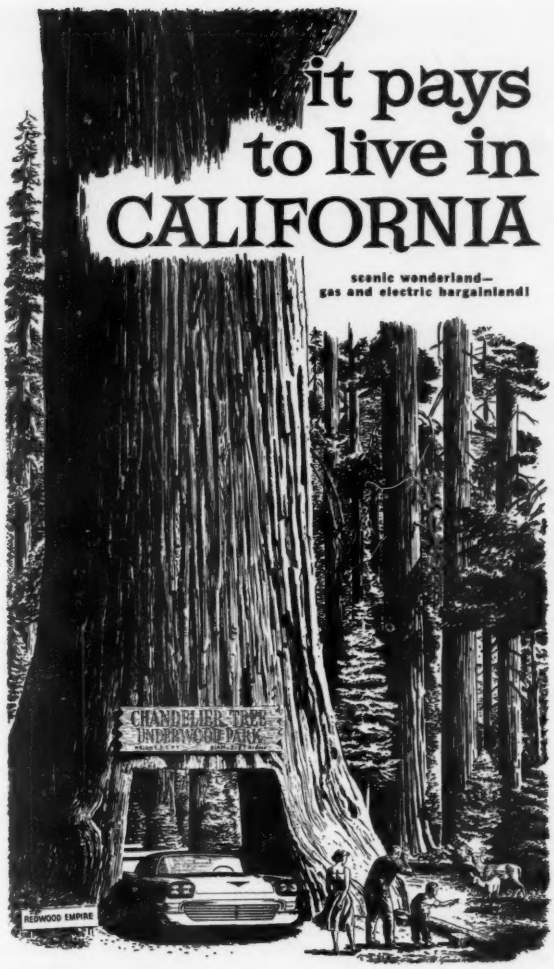
We know by experience that we can handle a bill complaint adequately once it is registered. We know that the better trained our employees are, the better they can handle customer complaints.

We believe that once a customer has been educated to an intelligent understanding of the value of our service, he will remain satisfied that he's getting his money's worth.

Obviously, however, we cannot afford to take on our millions of customers one by one. Moreover, we should not wait until a customer comes to us with a chip on his shoulder. The wiser course is to educate our customers in the mass—and explain before they complain. Nothing would seem to be much more important to our industry today.

The course of action is to sell value of service to the mass customer public through mass communication channels. We have the media, the tools and the talents at our disposal.

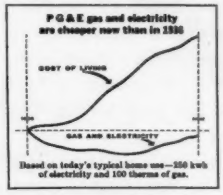
A factor compounding our problem is that people take utility service for granted. It's not like the dairy delivery business. When a housewife hauls in five quarts of milk a day for her brood, and hauls out five empties, she has a pretty good idea of how big her milk bill is going to be. But she doesn't think that way when she flips an electric switch. She doesn't even realize she's flipping. Likely the first time she "flips" is when she opens the utility bill.




**P. G. and E. customers save 27¢ on the dollar**

The California Public Utilities Commission reports gas and electric costs in America's leading cities. Compared with the average for the cities outside California, P. G. and E. customers save 27¢ on the dollar!

And here's more good proof you're getting a bargain. In the chart at right you'll find the gas and electricity you use today cost even less than they would at 1936 rates! Why not let this low-cost energy do more of your work, save you time, add to the pleasure of living in beautiful California!

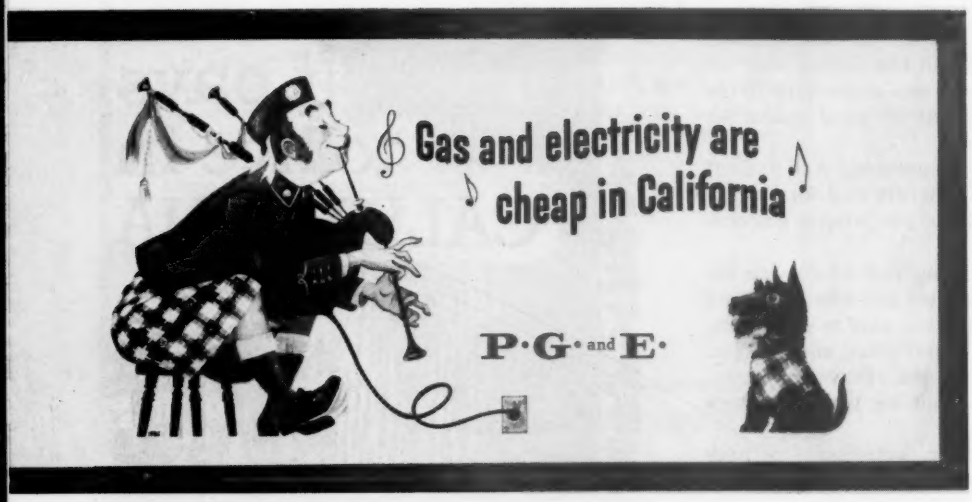

P G & E gas and electricity are cheaper now than in 1936
COST OF LIVING
1936
NOW
GAS AND ELECTRICITY
Based on today's typical home use—250 kwh of electricity and 100 therms of gas.

*Gas and Electricity are cheap in California* P·G·E· Pacific Gas and Electric Company

Pacific Gas and Electric Co. used the "chamber of commerce" approach in its advertising schedule, pointing out that it "pays to live in California." Although this series of ads met with some success, it was found that the customers weren't interested in what utility customers in other parts of the country were paying—but in the size of their own bills.

We've got to make her aware of it before we can educate her to the value of it.

It goes without saying among public information people that we have to get attention to be heard, and that we have to be understood to be believed. Most




Pacific Gas and Electric also adopted a "fire-sale" approach to advertising; proved that electricity was cheap in California. However, the customers still were concerned about the size of their bills.

essentially, we must establish a mutual frame of reference with the public, and we must pay attention to semantics.

It is quite apparent that people don't understand rates or care much about them. Bills are what they worry about. So we lose something when we explain bills to them in our frame of reference—rates—when their frame is bills.

Many in the industry refer to complaints as "high-bill complaints." High is not the correct adjective. The bills are not high. The first thing we do in handling a complaint is to explain that the charge is low, not high, for the service rendered.

The proper adjective is "big." Or "large." The bills are big. We're determined to make them bigger. If the customer wants to have a smaller bill, we can show him the way. All he has to do is be colder in winter and warmer in summer; or put his wife back into kitchen slavery; or give up television. He can even turn off the heater in his swimming pool.

The bill may be big, but with our low rates it simply cannot be high!

Rates are not the important contributor to big bills. Usage is. We need to educate the public to awareness of vastly increased usage. Then the value of service pitch would score tops in believability.

At Pacific Gas and Electric Co., we have gone through a wide spectrum of approaches to this problem. Our experience is much like that of other companies. Here is a one-company case history of making the value of service pitch.

We have worked both sides of the street, and down the middle, on this subject for a dozen years. We have carried on a continuing advertising campaign—with different approaches and variations on the theme. Some of our ad campaigns were very effective; none of them was a dud. All of them, in retrospect, could have been better. Cumulatively we have put across our story, and we have learned some lessons along the way.

Here are some of the approaches, and some of the lessons learned:

*The Penurious Approach:* The pennies-a-day pitch. We advertised how many slices of bread could be toasted for one penny. We got the message across to a lot of people, but we found that we could not convince everybody that our service cost just little pennies when the bill came in such big dollars.

*"Odious Comparison" Approach:* This campaign pointed out how much more gas and electricity you could buy then for what it cost 15-25 years earlier. This went back beyond the memory of most people. They weren't fully aware of how much more service they were using. Their reaction was: if what we said was true, then why are bills $10, $20, and $30, instead of just $4 as they used to be?

*The Chamber of Commerce Approach:* We pointed out that our customers were lucky to live in California. We advertised that service cost less here than elsewhere, and we proved it. The great majority of the public couldn't care less. They never had lived elsewhere or forgot that they had. They didn't care what service cost in other territories. They were concerned that it didn't cost less in ours.

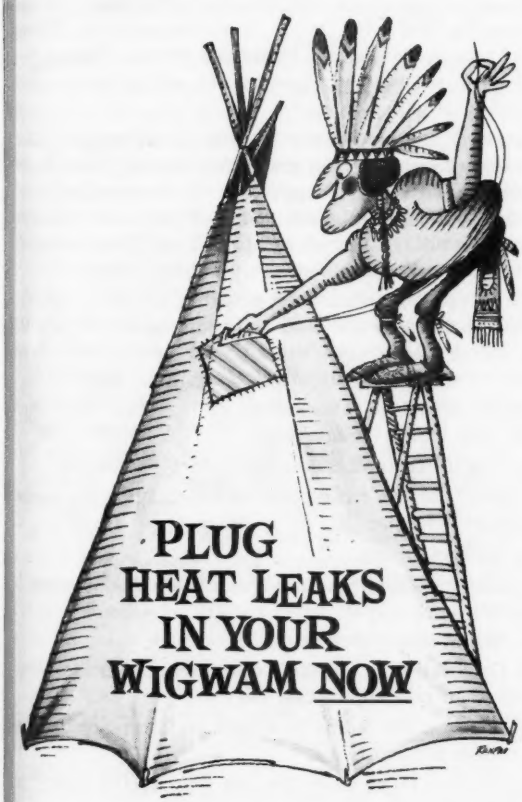
*The Fire Sales Approach:* We adopted the slogan, "Gas and Electricity Are Cheap in California." And we proved it. A definite reaction finally came through: "Well, if gas and electricity are so cheap in California, why is my bill so big?"

*The "Golden Hours" Approach:* We talked about the comforts and conveniences of modern living—with freezers, dryers, dishwashers, and so on. These appliances were blessings, we said, which gave women leisure time—"golden hours" of freedom from household drudgery. Indeed, many women did become better

The service bargain approach is now being used by Pacific Gas and Electric in its advertisements. The institutional-type ad at right is one in its "value-of-service" series. The institutional ads point out interesting, often dramatic, new things PG&E is doing to provide better service to all its customers at lower cost.

"Shooting" power lines over canyons helps keep PG&E service your best bargain
If you see a PG&E lineman with this strange-looking gun, he's stringing power lines—not hunting. Canyons, dense trees, streams and other obstacles slow up power line construction. But not with a modern line-throwing gun! It can shoot a light line more than 400 feet over obstructions—then the power line is attached and hauled through otherwise impassable sections quickly—and economically. Saving time and construction costs with efficient methods like this is another example of creative engineering at Pacific Gas and Electric Company as it builds ahead for a state on the grow.
CREATIVE ENGINEERING
PIONEERING RESEARCH
PROGRESSIVE PLANNING

...ps to help the customer save money in winter ...ve been featured in Pacific Gas and Electric ...ds. The company's "getting-ready-for-winter" ...mpaign in the winter of 1960-61 reduced ...g bill complaints on the system 22 percent.




*(save plenty wampum this winter)*

Almost every home "leaks" heat—honest Injun! ■ Some heat slips through loose-fitting doors and windows. About 16% is lost through window glass. And up to 45% escapes through uninsulated ceilings! ■ By weather-stripping and insulating *now*, you can prevent much of your heat loss during the winter months ahead. By keeping draperies drawn and the fireplace damper closed, you can stop still more heat loss. ■ This way you'll have a warm, wonderful wigwam *every* winter . . . and save heating dollars, too!

P·G·E· Pacific Gas and Electric Company

housewives and mothers with their new labor-saving appliances; in fact, some of them also had more time to complain about their bigger bills.

In the fall of 1959 we took a long look at our experience with these and other campaigns. We set about to find a better way to accomplish our value of service advertising objective. We recognized these facts as basic to our consideration:

- We had not had an electric rate increase for 3½ years, and we were not about to have one.
- Bills were getting bigger, and would continue to do so.
- People just plain beef louder at $20 than they do at $10.
- We shouldn't talk pennies when the customer's problem is in dollars.
- We aren't convincing with talk about cheap rates when we are selling expensive amounts of service.

Our conclusions were that:

- We must sell the value of service, not the price of service.
- We should seek customer appreciation for what he gets for his utility dollar.
- We should try to get credit for all the things we are doing to keep our prices down.
- We should demonstrate continually that "PG&E Service Is Your Best Bargain."

On this set of ground rules we decided upon *the bargain approach*. We refined the word "bargain" to apply to service . . . not dollar bargain or rate bargain, but *service bargain*.

People like bargains. In the investor-owned utility business, "service is our most important product." Government-owned utilities can offer better rate bar-

When it's shiver-y outside...
. . . your PG&E bill is probably higher than usual. That's normal, of course, for winter. With colder weather, darker days, longer nights, you're using more heat and lights, watching more TV, cooking more hot meals, doing more indoors. You've probably added more electrical conveniences during the past year, too. But you can count on us to keep PG&E service your best bargain. Our customers pay $1 for gas and electricity that cost $1.25 elsewhere.*
P·G·E

This is another in the series of ads used by Pacific Gas and Electric to explain why bills are bigger in the winter months. The ad points out that with colder weather, darker days, and longer nights, the customer is probably using more of nearly everything electrical, "but you can count on us to keep PG&E service your best bargain." It was well received.

gains and better dollar bargains, but they cannot offer better service bargains. That's *our* stock in trade, and it is the most recognizable profile of our corporate image.

The advertising theme we came up with is: "Keeping Our Service Your Best Bargain Is Everybody's Job at PG&E."

Maybe next year I'll tell what we've learned from this approach and why we're trying something else.

We've had some good ads on this service theme, ads which at the same time give us other values. Our institutional ads point out interesting, often dramatic, new things we are doing to give better service at lower cost, operating practices, new developments in atomic plants, an underground hydro plant, surveying by radar, automation, all kinds of things demonstrating that we are finding new ways to do things, developing better methods on the job, cutting costs with pioneering research and creative engineering—to keep "PG&E Service Your Best Bargain."

We stress bargain in sales copy, lighting ads, commercial, industrial and farm ads, and everywhere else we can use it to drive the thought home to our customers, and pound it in with repetition.

We hired Reddy Kilowatt to help us tell the value of service story, and among the many other chores he undertakes, Reddy is a big help in explaining big bills.

Our value of service campaign still isn't enough to protect us when big bill season rolls around. That takes special attention. This continuing value of service campaign, however, sets the stage of believability for talking turkey about big bills—in the customer's language and in his frame of reference.

We do it this way:

We employ every communications medium at our disposal in the autumn months to tell people: "Winter is coming, and with it will come bigger bills. Here's what *you* can do to get ready for winter. Here's how *you* can cut down your heating bill and get more value out of your utility dollar."

Last winter gave us our first chance to test the effectiveness of our "getting ready for winter" educational approach. This effort, together with the excellent work of our painstakingly trained customer contact personnel, combined to reduce big bill complaints on our system 22 percent under the previous winter.

It is recommended strongly that all of us in the utility business work externally and internally on the big bill problem, and that all year around we stress *value of service* in our advertising.

In summary, here are some of the ideas Mr. Dierdorff and I have suggested:

- Highly trained customer-contact personnel.
- EDP sorting out of extraordinary bills, for special customer attention.
- Budget billing.
- Meter-reading notification of unusual jumps in consumption.
- Bill-analysis service.
- Get dealers to tell their customers the true operating costs of new appliances.
- Educate the public to expect and be ready for big bills when winter comes.
- Remind them when the big bills arrive that "the season's the reason."
- Talk to customers in their terms and their frame of reference.
- And—most importantly—get off the defensive and take the offensive.

If all of us across the country do this sort of thing in concert, we'll be serving our companies individually and also improving the general welfare of our entire industry.

# An Unbiased Story of Electric Power . . . from the Government Point of View

AMERICAN students can learn all they wish to know about electric power today—so long as it is government power, Henry G. Harper, Public Information Manager of Southern California Edison Co., recently told the Business Development Conference, Northwest Electric Light and Power Association.

Speaking before the group in Spokane, Wash., Oct. 17, Mr. Harper said that the widely used textbook, Magruder's *American Government*, deals almost exclusively with government power and only mentions investor-owned projects in connection with "exorbitant profits," which it says led to formation of the Federal Power Commission. Other leading textbooks give similar treatment.

*Excerpts from Mr. Harper's address follow.*

Surveying opinions of a group of high school seniors, Opinion Research Corp. found that they estimated average company profits at "over 50 percent"; average investment per worker at $81; and average return to the stockholders at 24 percent. How important are student opinions? By 1970, today's boys and girls in their teens will make up one-fourth of all voters, consumers, and employees in America!

When these frightening facts were brought to our attention, our next step at Southern California Edison was to determine what, if anything, could be done about it. We found, first of all, that educators are receptive to outside teaching aids, *if* they are prepared with intelligence and restraint. Secondly, we found that teenage attitudes are still in the formative stage and *can* be affected by exposure to accurate information about American industry.

A follow-up survey on the same high school group referred to earlier—after exposure to the private industry side of the story—showed their estimate of average profits had fallen from 50 percent to 10 percent, and the estimate of investments per worker had risen from $81 to $1,000.

Observing these results, it was a short next step to look into the "Power in Our Lives" program conducted by Paul S. Amidon & Associates of Minneapolis. This program consists of a 48-page teacher's guide and four classroom charts—all designed to show the impact of power and light in the lives of all of us, and to underline the important contributions which electric companies make to the nation's economy. Some 20,000 sets are now in use in 24 states, by 12 electric utilities. The material is applicable to all grades, from elementary through senior high school. Its tone is quiet and non-controversial—and, therefore, effective.

After a careful review of the program, we at SCE undertook our initial distribution of teacher kits in 1959. During the initial phase of the program, the materials were distributed by the Amidon field people —who had many valuable contacts with educators— but we then brought our own field forces into the picture to work with Amidon on a continuous, year-to-year basis.

The final measure of any such effort, of course, revolves around results. And we have been greatly encouraged by the results of a recent survey in the service territory of Northern States Power Co. Eighty-five percent of the high school and junior high school teachers polled rated the materials as excellent or very good. Ninety-two percent said they used the material "some" to "much."

This, to me, is eloquent proof of the value of the program to electric utilities. For no one can predict which electric company will pay the penalty for students who, as a result of their exposure to government power propaganda today, become dedicated government power voters tomorrow.

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# BLBS Bureau Offers New Lighting Folder

A NEW folder on lighting for better seeing in the home, "Light, an Aid to Sight," is available from Better Light Better Sight Bureau, 750 Third Ave., New York, N. Y.

Pocket-sized and attractively printed in two colors, the new eight-page folder is suitable for distribution by utilities to optometrists and ophthalmologists, for use at meetings of service clubs, civic groups, health groups, and at meetings conducted by utility home service and home lighting personnel, for availability to schools, and for use as a direct mail piece or bill stuffer.

Examples of correct lighting are illustrated and described, with complete information as to lamp placement, bulb sizes and other pertinent criteria.

"Light, an Aid to Sight," which carries BLBS form #B-562, is designed to fit handily into pocket, purse or #10 envelope, and is priced for distribution in quantity by utilities at $2.50 per hundred in quantities up to 1,000; $20 per thousand in quantities up to 5,000, and $15 per thousand in quantities over 5,000, FOB New York.

# 8th Annual Workshop Stresses Future Area Development Plans

FUTURE plans aimed at advancing the economic development of areas served by electric utility companies, as well as of the nation itself, were discussed at the Eighth Annual Area Development Workshop of EEI, Nov. 14-15, in Miami, Fla.

The theme of the workshop was "Area Development Charts the Future."

Among the subjects stressed were:

- A total concept of area development.
- Area development activities of 107 EEI member companies as indicated in a recent survey.
- Utility area development programs as viewed by an outsider.
- The problems in restrictive zoning.
- Development of timber resources.
- The community's role in redevelopment programs.

S. L. Drumm, President, West Penn Power Co., in discussing "A Total Concept of Area Development," said that an electric utility can expect to grow and prosper only as the area it serves grows and prospers. "Thus, the destiny of both the utility and its service area rests on economic development," Mr. Drumm emphasized.

He said utilities are fully aware that they can achieve growth in only two ways: by selling more to their present customers, and by adding new customers. (The full text of Mr. Drumm's address begins on page 412.)

R. P. Lee, The Connecticut Light & Power Co.'s Area Development Manager, and former EEI Area Development Committee chairman, presented the results of a survey of area development activities of EEI member companies.

In response to the 1961 questionnaire, Mr. Lee said, 107 companies serving some 38,000,000 customers replied. Sixty-five of the companies responding maintain separate departments responsible for area development, with staffs varying in size from one to 21 full-time employees.

The survey also revealed that:

- The average area development department has three full-time employees.
- Sixty-four of the reporting companies use national advertising as an element of area development promotion.
- Sixty-six companies devote more than 50 percent of their budgets to industrial development, and 64 of the same companies devote more than 50 percent of their man-hours to this aspect. Only eight companies devote more than 50 percent of their budget to community development.
- Thirty-one companies participate in natural resources and conservation activities, 17 undertake recreational development, and 38 actively promote planning and zoning.
- Eighty-one companies prepare industrial site and building bulletins, and 66 prepare guides for community development, financing, etc.
- Ninety-four companies make personal solicitation of prospects outside of their home territories.
- Fifty-six companies list economic development of the service area as the first objective; 32 list new business; three give first place to public relations. Eighty-seven companies assign importance to all three responsibilities.
- Fifty-seven companies maintain their area development departments under the executive direction of the vice president of sales or general sales manager, while 23 companies have the department reporting directly to the president of the company.
- One hundred and five companies cooperate with commerce departments or development commissions in their states, 83 with other electric companies, 69 with gas companies, and 96 with railroad industrial agents.
- Fifty-four companies actively promote or participate in urban renewal or development programs.

"We see very few utilities participating in any kind of coordinating council which might devise and implement growth strategy for the economy of the region," Maurice Fulton of the Fantus Factory Locating Service, told the meeting. "Sometimes we come across conditions of conflict among utilities and other development agencies within a state. The power company, railroads, state groups, state chamber of commerce, all may have individual programs, but completely uncoordinated and perhaps negating one another's efforts—at least not getting full horsepower out of the combined effort," he said.

How do the efforts and activities of the utility trying to attract industry to its area look to those to whom these efforts and activities are being directed?

### Same Old Cliches

Mr. Fulton pointed out that much of the advertising to attract industry contains the same old cliches and generalities—"good living," "plenty of room to grow," "ready, willing labor force," etc.

"Little attempt is made to convey to specific types of prospects the special reasons why an area is well-suited to growth," he told the workshop. "In the field of information, while most of it is helpful," he added, "so much is inadequate because it does not attempt to answer the questions which the inquiring company has asked. However, I should point out that, as rare as is the direct, intelligent, specific, prompt response, it is still more common among utility representatives than among most other development groups."

Mr. Fulton said that sometimes his company waited weeks for replies to inquiries. "There have been cases," he said, "where we have received information *after* the location study has been completed and a decision made."

Mr. Fulton said more was expected of electric utility area development people than from other development groups. "Among all agencies involved in this work, you are certainly in the most advantageous position to provide the kind of leadership for the organization of community development and the implementation of the programs developed by such groups," he declared. "Because of this, we like to work with utilities. For one thing, there appears to be a pretty good sense of objectivity about areas. You are prepared to point out the problems of an area. You do recognize the shortcomings and possible negatives of a city or a region you serve."

F. H. Bair, Jr., Consultant on Planning and Economic Development, Auburndale, Fla., suggested that EEI or some other body broadly representative of the electric utility industry publish a guidebook dealing with the best practice in industrial zoning.

Most small towns, he pointed out, don't know how to go about planning for good industrial development: they don't know what kind of industries to seek, or what kind of land to set aside for them. Most of them also don't know how to write industrial zoning regulations, or how to administer such regulations after they are written, he added.

"It should be obvious," Mr. Bair said, "that these towns need guidance. They are not likely to stumble on the right answers by themselves, and the wrong answers are all around to be copied from."

A guidebook on industrial zoning would start with a description of the way planning for industry should be handled locally, Mr. Bair told the workshop. It would also show why antiquated zoning often blocks industrial progress, set forth the reasoning behind modern industrial zoning, and go into performance standards in detail.

Any over-all projection—or plan for the future—must recognize one vital fact, that trees are the one renewable resource of this nation, C. D. Dosker, President, Gamble Bros., Inc., Louisville, Ky., told the workshop. "No plan for future development in any region or area should exclude the economic potential of this timber resource, regardless of its present condition of growth."

Mr. Dosker said that "the kind of forest products industry that would be most suitable for any given area could only be determined by careful study and market analysis. Within the Edison Electric Institute, you would do well to set up your own team of forest market specialists, who could be available to any member company."

"A well-planned program that will bring to market the combined product of the utility company's forest and farm forest can be of tremendous economic benefit to this country and to the profit of the utility company," Mr. Dosker said. He pointed out that wood needs only imagination, applied knowledge, and leadership to be the instrument that will create economic health and prosperity to many of our so-called "backward" or "problem" areas. "Forests, forest products, and industrial development go hand in hand," he told the meeting, "and the forest can be a vital part of any well-planned area development program.'

H. W. Williams, Assistant Administrator for Area Operations, Area Redevelopment Administration of the U. S. Department of Commerce, said the whole area redevelopment program is built around the belief that the basis for the economic redevelopment of areas of substantial and persistent labor surplus must begin with an attack on community paralysis.

### Community Must Start Wheels Turning

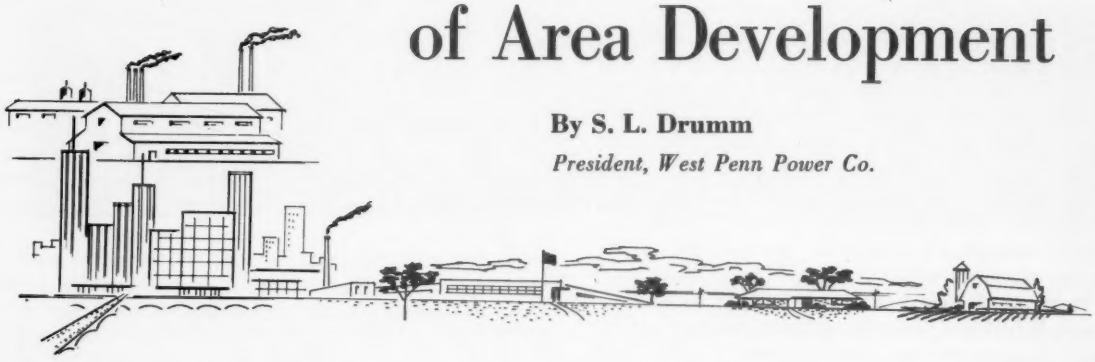
"The community, itself, must start the wheels turning," Mr. Williams said. "It must organize a representative group—civic officials, business leaders, utility officials, financial leaders, trade union representatives, educators, engineers, and planners of all types—to tackle the basic job of rebuilding the local economy."

He emphasized that this is not a Federal program, not a state program, but a local program. "Unless something happens in the community," he told the workshop, "there is no program. No loans are made, no grants are made, no new businesses are started, there is no new employment. It will take local initiative to get the job done. With all groups working together and relying on local initiative, the best job will be done."

Mr. Williams said: "You are the pioneers in area development. You can supply much-needed technical competence in helping your communities gather up their forces to transform their economics. You can lead the way.

"There is much which can be done by America's light and power companies in helping to remove the blight of area unemployment. Our nation will be stronger if we succeed. We need your help, and we pledge you our cooperation in seeing to it that your help is effective."

# A Total Concept of Area Development



By S. L. Drumm

*President, West Penn Power Co.*

THE area development concept of most electric utilities has changed materially over the years. This change has been reflected in a movement away from the narrow industrial development types of programs, which were directed almost exclusively to the attraction of new industry, to a much broader concept.

Because programs for attracting industry are highly competitive, those associated with efforts to attract industry are realizing that past programs and activities are not adequate to meet present-day needs. Today, we find a number of other activities included under the broad banner of area development—natural resources and agricultural development, travel, vacation and resort development, and community development.

It is quite apparent that there is a new sophistication in area development, as more and more utilities establish specialized departments, and as these departments are staffed by highly skilled professionals. Even so, there are few programs which I know about that truly follow a "total concept."

An old truth, being forcefully rediscovered today, is that an electric utility can expect to grow and prosper only as the area it serves grows and prospers. Thus, the destiny of both the utility and its service area rests on economic development.

### Two Ways to Achieve Growth

Utilities are fully aware that they can achieve growth in only two ways:

- By selling more to their present customers.
- By adding new customers.

An area development program, to be total in concept, must contribute significantly to the attainment of both of these objectives—selling more to present customers and adding new ones. Properly designed and implemented programs will do just that. The attraction of new commercial and industrial enterprises with attendant employment fills the need for new customers and, in turn, causes a general improvement in the economy. These changes then generate additional business for present service industries and trigger the establishment of new ones. Needs for schools, public services, and community facilities are also increased, providing greater sales opportunities in all the utility's markets—industrial, commercial, residential, farm, and municipal.

### By-Products Accrue

In addition to these growth benefits, however, other important values should accrue to a utility from an area development program that is broad in scope. Providing leadership and other help to community groups in programs directed toward economic development has an important by-product—that of improving relationships with the public and with governmental agencies, including regulatory bodies. It is one of the best possible ways to build a company image which reflects full acceptance of corporate citizenship responsibilities.

Finally, a comprehensive area development program should also help to foster our American way of life and the free enterprise system.

What are the ingredients and considerations of an area development program which will satisfy growth needs and simultaneously secure the most important by-products of improved public relations and a strengthened free enterprise system?

Whether a company already has an area development program or is considering one, a fundamental step is to take a long, hard look—both from a short- and long-range point of view—at the present economic situation in its service area. The intent of such a study should be to answer two basic questions: What are the needs peculiar to the area? What are the opportunities?

There is constant change, wide in scope, occurring in the nation's markets, labor force, and the production and distribution pattern of goods. Through research and development, changes are also taking place in the

An address before the Eighth Annual Area Development Workshop of Edison Electric Institute, Miami, Fla., Nov. 14, 1961.

exploitation of natural resources and the conversion of these resources through manufacture into both existing and new products. These changes result, in turn, in a continual adjustment in the economic position of various states and regions. This situation calls for frequent reappraisal of efforts directed toward economic development to be sure these changes are recognized and that programs are modified to take full advantage of them. It is always essential to evaluate one's own locality against the backdrop of the national picture. Following this approach, area development activities can be directed to maximizing those opportunities already present in an area, and also recognizing additional potential opportunities as the national scene changes. A program which is not in harmony and tuned to the times has only a poor chance to succeed.

### Avoid Tendency to Conformity

Certainly the tendency to conformity should be avoided. Just because a program or means of implementation has been successful in one area is no guarantee that similar efforts will do an equally successful job in another area. Each area has its own peculiarities, its own advantages and disadvantages. And attitudes and interests of people differ from area to area. This does not mean, however, that tried and proved activities in one area should not be used as guides elsewhere. With proper local adaptation, they may well be the solution for similar problems.

Area development programs are much broader today than ever before. But because of the glamour and readily demonstrable effects in accelerating economic growth through the attraction of new industry, this has been the major element in many programs undertaken. In some instances, this has been true to the exclusion of almost anything else, including attention to retaining the industry already located in the area. Certainly the attraction of new industries is a desirable goal and its importance in the over-all picture cannot be minimized. Preoccupation with this facet, though, has resulted in distortions in area development programming and, in some cases, has led to severe community problems. The program that is limited to the attraction of new industries and measured only in terms of utility revenues and new employment opportunities for the area may actually prove to be a Frankenstein.

There are many examples of undesirable situations resulting from the introduction of new industries to communities that are not prepared for them and which do not have a plan for orderly growth. Whether an industry is influenced by an organized community effort to locate in a particular area, or whether the decision is made by a company on its own volition, is not important. Over a period of time, a number of difficulties may show up, due primarily to the haphazard growth that occurs. One of the bad effects is the overtaxing of public facilities and services such as water, fire protection, streets, highways, and schools. In such a situation, too, severe labor problems may be created which disturb and even cause the loss of industries already located in the area.

A program cannot be total in concept or successful in the long run unless it rests on the solid foundation of community development, and simultaneously provides a comprehensive plan for orderly growth—a plan which makes provision not only for the physical facilities of a community, but also the cultural and aesthetic elements which mean so much in any living situation today. Community development, in fact, is the key building block—the cornerstone of area development. The one best opportunity for an area to hold and advance its economic position, the one for which most can be done, the one that can be most easily tackled, the one in which everybody can participate, and which will have appeal regardless of special interest, is to develop a comprehensive community development program. A community development program cannot be effective, however, unless energetic and enthusiastic support on a community-wide basis is first obtained. Further, the over-all potential benefits must be fully understood by everyone in the community, and particularly by those with authority to make decisions necessary for successful implementation of the program.

The greatest progress today in community betterment is being made largely in those areas where management, labor, civic, and governmental leaders all take the position that the shortest route to achievement of individual objectives is through sound community development objectives. Individual objectives must be merged with those of the community itself.

By this progress, vibrant and dynamic economic growth can result, rather than slow paralysis and stagnation from indecision and inaction.

No single plan or program, regardless of its ingenuity, will quickly solve all community problems. In our opinion, though, emphasis on the single factor of improving the business climate of a community potentially can make the greatest contribution to the economic advancement of the community. We believe that improvement of a community's business climate should be the principal ingredient in any comprehensive community development activity.

### Competitive Costs Determine Expansion

To a greater extent than ever before, decisions involved in business expansion hinge on competitive costs. Anything in a given location that affects the cost of doing business affects a firm's competitive position and its ability to earn a profit. These factors, in turn, obviously have a bearing on the company's ability to maintain or expand production and jobs.

Many of these cost factors are largely determined by actions and attitudes within a state or community. An inequitable tax structure, inadequate schools and other public facilities, labor unrest, poor fire and police protection and law enforcement, and many other elements may drastically affect the cost of doing business and void the attractiveness of an otherwise good location for industry. These environmental factors—social,

economic, political—make up what is commonly called the "business climate" of a community.

All other factors being equal, the most common reasons for industry moving or expanding elsewhere are community-related problems and dissatisfactions with the business climate of an area. In any attraction of new industries, the reputation that a community has for a good business climate is just as important as the traditional factors of geography, labor, raw materials, markets, and such.

It is axiomatic that unless the kind of business climate can be created that will make the economic activities already located in an area want to remain and expand in that area, any plan for the attraction of new industries, exploitation of natural resources, or vacation and resort development will be doomed to failure before it starts, and will eventually fail.

We need to know a great deal more and in greater depth the attitudes and problems of firms that contribute to our economic growth, and what they really think about their present locations. Just what do they consider favorable and unfavorable factors in doing business in a given community or area? It naturally follows that when any source of dissatisfaction is discovered, indicated corrections should be made. At the same time, obviously, factors considered favorable should be capitalized upon.

No matter how strong the interest or aggressiveness of the utility may be, no matter how much money is put into area development, no matter how many professionals are employed, these efforts cannot be fully effective unless the business climate of the area is right.

### Comprehensive Community Development

In designing a total area development program, then, primary attention should be directed toward the establishment of a sound, comprehensive community development activity, rather than the narrow approach of attracting new industry. The core of this community development activity should be that of improving the business climate.

This approach is not new or revolutionary. It has been advocated by the Chamber of Commerce of the United States for a number of years, and is the basic principle in its series of pamphlets on community development. The General Electric Co. also recognizes this need, and has just recently updated and made more comprehensive its handbook, "Improving Your Community's Business Climate." These publications define in depth the action needed and how to create and maintain a good business climate. The effectiveness of this approach has been made abundantly clear by the success of a number of communities where it has been employed.

That one purpose of an electric utility's area development program is to aid in the growth of the utility is well accepted. That such a program should be broad in nature and place primary emphasis on building a better business climate is somewhat less accepted. That this same program should also make a major contribution to improving public relations and to promoting the free enterprise system, and particularly, advance the cause of the investor-owned electric utility industry against the proponents of more Federalized power, is apparently given very little recognition. Yet the public relations and free enterprise goals may be the most important ones of all. Unless a company survives the competition of the Federal government, all efforts for a company to grow are meaningless.

### A Bigger Challenge

We face a much bigger challenge than building the growth of our respective companies. We need to defend more effectively and build a much stronger image of the American way of life—both within this country and throughout the world. Specifically, we need to build a much stronger image of the investor-owned industry of this country and the job it is doing to contribute to the advancement of our nation. Area development can and should contribute substantially to these goals.

An aggressive, well-planned, free-enterprise-oriented community development program which helps private business solve its problems and makes it stronger, in turn, certainly helps to preserve the system of private business itself. A program, too, which helps community, governmental, labor, and public leaders to understand better our economic system and business problems, and influences these groups to help solve these problems, also advances the cause of our free enterprise system.

Efforts to build a better business climate also cause business itself to do more about solving its own problems. The primary responsibility of business management is, of course, to make a profit. But free business, as Henry C. Alexander, Chairman of the Board of the Morgan Guaranty Trust Co. of New York, points out, has other responsibilities, too. It must produce the jobs and the goods that spell prosperity for the nation as a whole. Even more than politicians, business must have a concern for human welfare and human progress. It must continue to succeed, not only in terms of its profit and loss account, but also in winning and holding the favor of the communities in which it lives and works.

Our free enterprise system is the best one yet devised by man. Yet, as Mr. Alexander observes, it is not perfect. It is an intricate and delicate machine, and at times creates hardships for individuals and groups. The bad side effects of the working of our system, even though temporary in nature, cannot be too severe. If they are, they will not be tolerated. The system that produces them will have to remedy them, or the system itself will not be tolerated.

Business, of course, cannot do the whole job. But unless a better job is done, business functions which could be performed more efficiently by private groups may, by default, go to the government. We must, therefore, do what we can to prevent problems from becom-

*(Continued on page 420)*

# LBE Promotion for 1962 to Be Launched in Reader's Digest

AN eight-page, full-color insert in the February, 1962, *Reader's Digest*, launching an industry-wide promotion of electric home heating and air conditioning, will help kick-off the Live Better Electrically campaign for next year.

### 14 Million Readers

The insert will tell the 14 million readers of *Reader's Digest* "how their homelife would change with flameless electric heating and air conditioning." The ad will point out that "over one million families now heat with flameless electricity," explain the five basic systems for electric home heating, the basic systems for air conditioning, basic facts about insulation, and why electric heat and air conditioning cost less than most people think.

A promotion kit giving details of the LBE home heating and air conditioning guide has been mailed to chief executives, sales vice presidents, sales managers, and advertising managers of all EEI member companies, as well as to significant allied industry members.

The kit includes a reprint of the *Reader's Digest* section, tie-in material for radio, television, and newspaper use by member companies, and information on a 20-minute, color-sound film on electric heating prepared by *The Saturday Evening Post* in cooperation with the Live Better Electrically program.

More than 1,200,000 reprints of the insert have been ordered by electric utilities and manufacturers for distribution to their customers.

The LBE advertising program for 1962 also has scheduled 12 four-color appliance ads in *Life*, *The Saturday Evening Post*, *Better Homes and Gardens*, and *American Home*.

A most important phase of the LBE program is the actual Gold Medallion Home series, featuring total-electric homes of people selected in all areas of the country. These ads, also featuring heating, appliances, lighting, and housepower, will appear in *Life*, *The Saturday Evening Post*, *Better Homes and Gardens*, and *American Home*. Thirteen black and white spreads on the Gold Medallion Home will appear in 1962.

In addition to consumer magazines, LBE has scheduled 14 ads in two leading builder publications, *House and Home*, and the *NAHB Journal of Homebuilding*. In these ads, leading builders in various parts of the country tell the building industry how electric heat gives them a distinct competitive advantage.

In addition to the LBE advertising program, individual electric companies throughout the nation will supplement this program with ads of their own, tieing in with the major ideas and themes of the national LBE program.

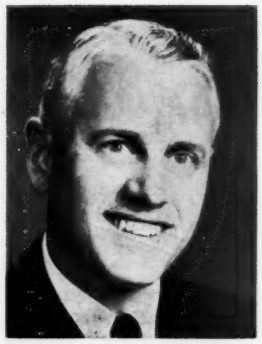
The manufacturers of electrical equipment also will tie-in with the LBE advertising and promotion program. Total program expenditures—EEI, local electric companies, and manufacturers—will amount to some $52.5 million for 1962.

The LBE program has announced that more than one million homes are heated electrically in the United States today, and that by 1965, another million will be added. It is expected that by 1970 there will be 5.2 million electrically heated homes in the nation.

### Vast Potential Market

LBE also pointed out that one in 50 U.S. homes is electrically heated, and the potential market is tremendous. There are 10 million air conditioned homes in the nation, and millions of prospects for the big market of the future—complete electric climate conditioning.

Use of the word "flameless" to describe the advantage of electricity will continue to be featured prominently in all LBE advertising. Research has shown that this word is remarkably effective in telling the American public about the cleanliness and comfort of total electric living.



L. H. RODDIS, JR.

# EEI's Technical Appraisal Task Force on Nuclear Power Is Dissolved

THE EEI Technical Appraisal Task Force on Nuclear Power, organized in 1956 to study broad, fundamental nuclear appraisal problems of importance to the electric industry, has been dissolved, Philip A. Fleger, EEI President, has announced.

The dissolution followed the recommendation of the task force, resulting from a survey of the members which indicated that the development of the art has been such that the industry can now best be served by the appointment of specialized task forces as needed to cover particular problems. The Committee on Atomic Power, from time to time, as advisable, will appoint task forces to make the necessary nuclear studies. The committee already has appointed an Ad Hoc Committee on Industry Ownership of Nuclear Fuel.

The Technical Appraisal Task Force was under the Chairmanship of L. H. Roddis, Jr., President of Pennsylvania Electric Co. Mr. Roddis assumed the chairmanship of the committee early in 1961 from J. F. Fairman, Senior Vice President of Consolidated Edison Co. of New York, Inc., who had headed the committee since it was organized. Mr. Roddis, who was a former deputy director of reactor development for the Atomic Energy Commission, joined Pennsylvania Electric in 1958.

During its tenure, the Technical Appraisal Task Force on Nuclear Power issued a number of reports, the last of which was a study of radioactive waste handling in the atomic power industry. Other reports included "Status and Prospects of Nuclear Power," and "Survey of Initial Fuel Costs of Large U.S. Nuclear Power Stations."

In a letter to EEI members of the task force, Mr. Fleger expressed his appreciation to the members for their service. "In behalf of the EEI Board, all members of the Institute, and — I am sure — the entire electric utility industry, I wish to extend to each of the task force members an expression of profound appreciation for their service," Mr. Fleger's letter said. "The task force has provided timely and invaluable information and counsel during a critical phase of our country's technical development. The task force's great contributions will have a lasting salutary effect on the science of nuclear power generation."

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# Film on Benefits of Good Lighting Available from EEI

A SOUND, color film, "You and Eye," dealing with the benefits of good, effective lighting in the home, school, office, and factory, is available from Edison Electric Institute.

The 15-minute, 16mm film discusses the eight-year research program of the Illuminating Engineering Society, the results of which are the basis for the recommended IES lighting levels. The film points out adequate lighting requisites for everyday seeing tasks. It explains how much easier, faster, and more efficiently work can be completed with proper lighting.

The film is an excellent basis on which to build a program for presentation to such groups as Parent-Teachers Associations, industrial management groups, civic, service and professional clubs, electrical contractors, school children, and others.

Prints of "You and Eye" are available at $350 for the first print, and $175 for additional prints to EEI member companies. The price to non-members is $400 for the first print, and $200 per copy for additional prints.

A free, descriptive folder giving complete details on "You and Eye," or prints of the film, may be obtained from the Sales Division, Edison Electric Institute, 750 Third Ave., New York 17, N. Y.

# Feb. 1st Is Deadline for Sales Promotion Entries

A SERIES of Sales Promotion Awards for outstanding sales achievements in 1961 in the four major markets—Residential, Commercial, Farm, and Industrial—will be offered again this year by the EEI Awards Committee.

Sixteen awards will be made: four in each of the four markets. They are for load-building accomplishments. Entries may be submitted for an over-all program, or as an individual phase of an over-all program, such as a dryer or fry kettle promotion. There are also meter classifications, which insure entrants that no matter what the size of their companies, they stand equal chances of winning.

Rules governing the entries have been so simplified that there can be no undue labor attached to compiling one or more entries. Folders describing the terms and conditions governing the entries for each of the four markets have been mailed. Additional copies will be forwarded upon request to Awards Committee, EEI, 750 Third Ave., New York 17, N. Y.

Since there have been very active promotions in all four markets this year, with special emphasis upon cooperation with national programs, and also upon various new developments, it is the hope of the Awards Committee that companies having had several successful promotions will enter.

These EEI Sales Promotion Awards represent top recognition for sales accomplishments offered to the electric utility industry.

Deadline for all entries is Feb. 1, 1962. Entries should be sent to Edison Electric Institute. Awards will be presented at the annual Sales Conference, Chicago, April 3, 1962.

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# Transmission—Life Lines of Electric Leadership

*(Continued from page 401)*

them what we are doing as an *industry*. This is particularly necessary. People have more confidence in our ability to meet America's power needs when they realize the strength and magnitude of the industry our companies make up—when they understand that we are not single companies working alone. We must place our company stories of future planning and building in their national perspective by emphasizing the story of our industry's growth.

We need not fear that what we have to say will not be interesting—it will be if we say it properly.

The Edison Electric Institute has recently made available a communications tool that I believe will help us all enormously. It is a series of charts—colorful, easy to understand, and comprehensive—that tell how investor-owned companies are meeting America's power needs, compare our records with those of other countries around the world, and review our industry's plans for the future. I am asking the public relations people in my own company to draw up a plan that will use these charts fully and most effectively. We intend to see that their plan is carried out.

I believe every company in the country should be making use of these charts and the other communications tools that are available to us. The advocates of government power are increasing their efforts: we must add vigor to our own.

These are things we can do—and things we must do—in New England, in the South, the Southwest, the Northwest, and all over the country. Our companies have shown vision and skill and courage in building the systems that have given America its electric leadership. We must now show vision, skill, and courage in bidding for the full support of the American people.

# Report on ASTM Wood Pole Tests

By L. J. Jacobi
*EEI Representative*
*Technical Advisory Committee*

FOR many years there have been standards to cover the length, diameter, and quality of poles according to established strength data. An ASA Sectional Committee to develop such standards originally was organized in 1924. In 1948, the American Standards Association Sectional Committee 05 on Wood Poles completed a study on war specifications and developed specification ASA 05.1-1948, which is still in use, but receiving much criticism.

Early in the 1950's, it became apparent that there was a need to have more information on the strength of the various species of poles commonly used in the United States. It was recognized that there were inconsistencies in the method of rating the various species of poles. These inconsistencies were based upon the fact that there were a variety of methods of testing and rating the various species.

It was further recognized that much of the test data available on full-size poles were limited and inconclusive, and that the stress values used were inconsistent with the data on strength of small clear specimens of wood as established by tests made at the Forest Products Laboratory. This lack of reliable data regarding strength of wood poles prompted consideration of a comprehensive research program as the only means of determining the correct answers. The American Society of Testing Materials, through a Subcommittee on Wood Poles and Crossarms of Committee D-7, was utilized, and consideration was given to the development of standard methods for testing wood poles, and to developing an outline of a research program, and for methods of implementing it.

### Objectives of Research Program

The major objectives of the research program were as follows:

- Obtain reliable data on the strength of untreated and treated poles to provide an accurate design basis for the principal pole species.
- Find out if tests of small clear specimens of wood can be used in place of tests of poles to establish fiber stresses for design.
- Find out how knots, spiral grain, checks, and splits affect pole strength, as a basis for improved specifications.
- Determine the effect of accepted preservation treating processes on the strength of poles and small clear specimens of wood.
- Compare the reliability of the two standard methods of pole tests and the results obtained from them ("crib test" versus "machine test").

A Technical Advisory Committee to guide the technical features of the work and a Ways and Means Committee responsible for developing the financing of the tests were formed. I served on both committees, as did Gen. L. G. Smith, Baltimore Gas and Electric Co. The total cost of the tests at the Forest Products Laboratory was about $300,000. The program was made possible only by the comprehensive, cooperative effort of a large number of companies, societies, organizations, agencies, and individuals. The EEI contributed $10,000 a year for three years, a total of $30,000. I was designated to be the EEI representative on the Technical Advisory Committee.

### The Need for Knowledge

The tests were started in 1954 and completed in 1960. The basic purpose of the program was to promote more efficient utilization of wood poles through more extensive and reliable knowledge of their strength properties, and of the factors that affect those properties. With an increasing number and variety of species of wood being considered for poles, the burden of testing full-sized poles was and is apparent. There was need for more knowledge of the basic principle of pole strength and for a correlation of the strength of the pole with the great volume of standard test data on the various wood species. Work to realize these objectives was continued for nearly six years, and included tests of some 620 poles, (540 by machine and 80 by the cantilever method). About 14,000 matched, small clear specimens of wood were also tested. The species of pole timber tested were southern yellow pine( including longleaf, shortleaf, slash, and loblolly pine, which comprise about 80 percent of all poles), Douglas fir, western larch, lodgepole pine, and western red cedar. Great care was taken to be certain that the poles and treatments were reasonably typical of those actually supplied to users throughout the United States.

All poles tested were maintained above the fiber saturation point. To do this, all test poles were stored under water at the Forest Products Laboratory and were soaked long enough to bring their moisture content to or above the fiber saturation point before they were tested. The purpose of this full-length soaking was to eliminate moisture content as a variable strength factor (1) in the comparisons of different species, (2) between treated and untreated poles, and (3) between poles that broke at different distances above the groundline.

In order to guarantee uniformity of strength, the specific gravities of the poles were taken as the fairest

ndicator. Poles of each species were selected in accordnce with the following plan: 25 were selected to be f average specific gravity; five had low specific gravty; five had high gravity.

The strength of poles is related to their specific gravity. Poles selected to be of average gravity are particularly useful for comparisons among species or between treated and untreated poles.

Poles were tested in the untreated condition and secondly, in the treated condition, with the treatment being the standard for that species. For example, southern yellow pine poles were given an eight-pound pressure treatment in agreement with the American Wood Preservers Association Standards. Western red cedar poles had the butts incised and were given a standard non-pressure (thermal) treatment.

Some of the important findings from the ASTM tests are as follows (I will not cover all the findings, but only those which I think will be of general interest):

1. The strength of a pole is related to the specific gravity of wood.

2. Southern pine poles of rapid growth and low specific gravity for the species were below average in strength.

3. There is significant correlation of the strength of untreated poles with that of untreated clear specimens, and of treated poles with treated small clear specimens.

4. Natural characteristics, such as knots or spiral grain, as presently limited in ASA Specifications, *are not an important factor* in controlling the strength of poles as they are most commonly used.

5. Preservative treatment has no consistent effect on the surface hardness of a pole.

6. The bending strength of southern pine poles was reduced 20 to 40 percent by steam conditioning, and treatment within the limitations of 1960 AWPA Standards, and the reduction of strength as a result of conditioning and treatment of southern pine poles was greater in the poles than in the small clear specimens of wood from the poles. (Note: 1960 AWPA Specifications permit steaming at 259F).

7. A supplementary series of strength tests on treated longleaf pine showed that shortening the period and lowering the temperature of steam conditioning gave strength values closer to those of untreated poles.

8. Further treating plant experiments showed that steaming temperatures of 240F to 245F may be used successfully on southern pine poles.

9. Bending strength of Douglas fir and western larch poles was reduced about 10 percent during the normal treatments permitted by 1960 AWPA Standards.

10. Lodgepole pine and western red cedar poles showed no significant change in strength as a result of treatments permitted by 1960 AWPA Standards.

11. The two standard methods of test gave essentially similar strength values.

12. Moisture contents at six inches and at four feet above groundline of poles in service in the northern and western states are predominantly in the approximate range of 10 to 15 percent. (This is of particular interest since practically all poles failed well above the groundline).

In my opinion, the ASTM pole tests were of great value and amply repaid the contributors for their investments.

For those who may want copies of the final report, it is entitled "Strength and Related Properties of Wood Poles," and may be ordered from the American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pa., at $5.00 per copy ($4.00 to ASTM members).

The result of this research program will serve as a basis for revision of the American Standard Specifications and Dimensions for Wood Poles. ASA Committee 05 has started work on this revision. The American Wood Preservers Association also is undertaking revision of its standards to reduce the maximum steaming temperature for southern pine poles to reflect the information obtained in this research.—*From report presented at the 86th meeting of the EEI Transmission and Distribution Committee, Des Moines, Iowa, Oct. 12, 1961.*

# Two Colorado Electric Utilities Merge

STOCKHOLDERS of Colorado Central Power Co. and Public Service Co. of Colorado, in separate special meetings, voted to merge their two companies.

Announcement of the stockholder action was made jointly by R. T. Person, President of Public Service, and J. W. Cryder, president of Colorado Central. The vote was the final action necessary to merge the two companies. Public Service Co. of Colorado will be the surviving corporation.

The agreement and plan to merge was first announced last August by Messrs. Person and Cryder. Approval by the boards of directors of both companies in September, and the authorization of the Public Utilities Commission of the State of Colorado in November, cleared the way for the stockholder action.

As of Sept. 30, 1961, Colorado Central served 42,151 electric customers. Public Service Co. served 351,634 electric customers and 330,236 natural gas customers.

# Three Types of Nuclear Reactors to Be Studied

EAST Central Nuclear Group, Inc., composed of 14 investor-owned electric utilities, will undertake a year's study of three types of nuclear reactors in the 500,000-kilowatt size. Its objectives will be to determine the probable cost of energy and the estimated effort required to solve the technical problems associated with each of the three types.

ECNG has announced that it has completed arrangements for a privately financed $680,000 survey of a heavy water-moderated, pressure-tube reactor employing three different cooling media: high-pressure gas, pressurized heavy water, and boiling water.

The evaluation of heavy water reactors is being made, ECNG said, in response to a suggestion by the Atomic Energy Commission.

These reactors have received relatively little attention in the United States, but the Canadian nuclear power program is largely committed to the heavy water concept.

ECNG also will review the most recent developments in nuclear power, including those reactor concepts proposed by major reactor manufacturers as the most attractive for future application.

Studies also will be undertaken to determine the effects of variation or loss of Federal subsidies on the fuel costs of enriched uranium reactors. Changes in subsidies could result from private ownership of enriched fuel, as recently proposed by the AEC, by the reprocessing of spent fuel by private industry, and by the establishment of a free market for plutonium.

The 14 electric utilities making up ECNG cumulatively generate approximately one-seventh of the electric power produced in the United States today. They are: Appalachian Power Co., The Cleveland Electric Illuminating Co., Columbus and Southern Ohio Electric Co., The Dayton Power and Light Co., Indiana & Michigan Electric Co., Indianapolis Power & Light Co., Louisville Gas and Electric Co., Monongahela Power Co., Ohio Edison Co., Ohio Power Co., Pennsylvania Power Co., The Potomac Edison Co., Southern Indiana Gas and Electric Co., West Penn Power Co.

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# A Total Concept of Area Development

*(Continued on page 414)*

ing so acute that only the government can cope with them.

In the process of building a better business climate, the businessman himself becomes more conscious of the over-all problems of the community. He understands better the total impact of business on a community and, as a result, he is inclined to contribute more to help solve these problems. Through this interest and action, whether he is an electric utility representative or any other businessman, he helps to build a better image of his own business and business generally.

The closer to home we tackle our problems, and the more we encourage communities to solve their problems, the more likely we are to hammer out lasting solutions and retain control of our individual liberties. The more we can influence a community and the business interests located there to take local action, the more we lessen the possibility of an all-powerful central government taking over direction and control of these affairs.

The proposal to create a new Cabinet Department of Urban Affairs and Housing is only one example of the trend to expand the powers and control of the Federal government. The supporters of this legislation have told Congress that the Federal government gradually should tackle such local problems as streets, mass transit, water supplies, sewage disposal, planning and zoning, recreation, and even snow removal. The Chamber of Commerce of the United States predicts this program would reduce a community to a Federal province.

An area development program, then, which is total in concept should not only work toward the traditional goals of growth, but also these public relations and free enterprise goals. In some aspects of such a program, utilities are in competition with each other, but in the broader opportunities the challenge is common to us all.

Together, we can advance the economic development of our respective areas and, in so doing, of the nation itself. We can build a better image of the free enterprise system and prove more positively than ever before that this is the best system ever devised by man. We can help communities and others realize that their salvation is in their own hands rather than in the Federal government. We can help communities fight to maintain their rights and responsibilities, and to determine their own destinies, rather than letting the government determine these things for them. Only when an area development program does all these things can it be considered to include a total concept.

# 300 Science Students Attend Third Annual Youth Atom Conference

High school science students study an exhibit at the Third Annual National Youth Conference on the Atom in Chicago.

SOME 300 of the nation's top high school science students met recently in Chicago to attend the Third National Youth Conference on the Atom.

There, under the sponsorship of 58 of the country's investor-owned electric companies, they met with America's foremost scientists to explore the peaceful promise of the atom.

M. L. Kapp, Chairman of the Electric Companies Public Information Program, was the chairman of the conference. Dr. Glenn T. Seaborg, Chairman of the U.S. Atomic Energy Commission, and Dr. Hans Bethe, Laboratory of Nuclear Studies, Cornell University, were among the key scientists who addressed the gathering.

During the three-day sessions, the students toured the Chicago Atom Fair, Commonwealth Edison Co.'s Dresden Nuclear Power Station, and AEC's Argonne National Laboratory.

At the conference, many of the students learned for the first time that the investor-owned electric utility industry is at the forefront in the nuclear research field.

A survey of the students showed that 166 of them had exhibited in science fairs. All but four of these were award winners in fields ranging from medicine to nuclear research to rocketry.

The survey also indicated that these future scientists are active in church work. Over 80 percent of them attend church regularly and two-thirds are members of a church youth group.

Although the conference is designed to reward the high school student for outstanding science efforts, some companies have found the conference aids them in their recruiting programs.

Students are selected to attend the conference on the basis of special examinations, science fairs, and through the recommendation of local educators.

Some 200 high school science teachers also attended the conference. Special seminar sessions were arranged between these teachers and leading science educators.

Reaction to the conference was uniformly enthusiastic. For many students, it was their first opportunity to meet with other science students of equal ability.

The PIP Steering Committee voted in Chicago to hold a fourth such conference next year, time and place yet to be set.

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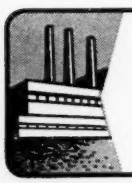
## Sporn Chair Established

ESTABLISHMENT of the Philip Sporn Chair in Electric Power Systems Engineering at Rensselaer Polytechnic Institute has been announced.

The professorship was established by a group of 16 sponsors, all associated with the U. S. electric power industry, to teach advanced principles of power systems engineering. Dr. Eric T. B. Gross, professor of electric power systems engineering at the Graduate School and Armour College of Engineering, Illinois Institute of Technology, has been named first occupant of the chair, effective Feb. 1.

Mr. Sporn retired Dec. 1 as president of American Electric Power Co., after a 41-year career in the electric utility industry.



# Prime Movers Committee Meeting

- *Air Pollution Activities*
- *New NFPA Boiler-Furnace Explosions Committee*
- *Utility Manpower*

**R. A. BAKER**
*Chairman*

THE Prime Movers Committee held its 104th meeting in the Rocky Mountain Region, Oct. 2-4 at the Continental Denver Hotel, Denver, Colo.

The meeting was highlighted by 129 different round table topics on steam power station design and operation, which were discussed by the 121 members and guests in attendance.

Numerous reports were presented on the activities of the many task forces, subcommittees, and special research projects sponsored, or partially supported, by Edison Electric Institute, on recommendation of the Prime Movers Committee.

L. R. Patterson, Vice President of Electric Operations of Public Service Co. of Colorado, addressed the group and welcomed them to Denver at the opening of the meeting on Monday.

### Cherokee Station

An inspection trip was made to the Cherokee Station during the afternoon of the second day, and the committee members were able to see some of the special features used in the design of this plant.

Before discussing the technical activities, the new members were introduced to the committee, and a special welcome was extended to them. New members are: W. F. Allen, Jr., Stone & Webster Engineering Corp., T. L. Austin, Jr., Texas Power & Light Co., A. O. Blatter, Union Electric Co., C. E. Brackett, Southern Electric Generating Co., W. J. Burns, Long Island Lighting Co., J. W. Grozier, The Cincinnati Gas & Electric Co., H. J. Guillory, Central Louisiana Electric Co., Inc., E. B. Heise, Northern Indiana Public Service Co., C. F. Jones, Duquesne Light Co., C. P. Lugrin, American Electric Power Service Corp., L. K. Mundth, Arizona Public Service Co., R. A. Mycoff, West Penn Power Co., R. M. Schahfer, Northern Indiana Public Service Co., V. C. Summer, South Carolina Electric & Gas Co., S. M. Swanson, Iowa Public Service Co., J. R. Taylor, Public Service Co. of Oklahoma, R. K. VanDervort, Sierra Pacific Power Co., C. E. Wiegert, Central Illinois Electric & Gas Co., H. L. Williams, The Cleveland Electric Illuminating Co.

The Executive Group for the current year, in addition to the Chairman, R. A. Baker, will consist of C. B. Vance, Vice Chairman, V. L. Stone and T. O. Thompson, past chairmen, J. M. Driscoll, Chairman of the Turbines and Condensers Subcommittee, V. F. Estcourt, Chairman of the Equipment Availability Subcommittee, J. C. Sonntag, Chairman of the Boilers and Combustion Subcommittee, and H. G. Hiebeler and R. H. McCumber, who will continue as members-at-large.

J. U. Baley, Chairman of the Air Pollution Subcommittee reported on recent national developments in this area, and asked committee members to participate in the work of technical organizations concerned with air pollution control. Mr. Baley pointed out that the ASME Committee on Air Pollution Controls established a subcommittee to review the ASME Model Smoke Regulation Ordinance. This latter group has prepared sections for a "Clean Air Ordinance" which has been submitted to the main committee members for a vote. Since the May PMC meeting, a "Cooperative Project Agreement" covering "Stack Plume Opacity Measurement and Evaluation" has been undertaken jointly by EEI and U. S. Public Health Service. An engineer of the Duquesne Light Co., J. Tash, will serve as EEI Project Supervisor, and a Steering Committee consisting of Messrs. V. F. Estcourt, Chairman, T. M. Hotchkiss, E. M. Parrish, and V. L. Stone, will follow this work.

The Chairman of the Boilers and Combustion Subcommittee, J. C. Sonntag, reviewed the latest activities of the group concerning power station design, operation and explosion. The subcommittee believes that research should be directed toward suitable instrumentation rather than causes of furnace explosions.

### Boiler-Furnace Explosions

The Committee on Boiler-Furnace Explosions was organized recently under the sponsorship of the National Fire Protection Association upon request from ASME. It has two direct representatives, C. W. Geue and J. C. Sonntag. The chairman of this main committee is also a Prime Movers Committee member, Graham Bice, who discussed the organization, scope, and work of this new group. It is expected that this NFPA committee will work closely with the Prime Movers Subcommittee on Boilers and Combustion and the Instruments and Control Subcommittee as these groups are vitally interested in studying every possible means of preventing boiler-furnace explosions.

V. F. Estcourt, Chairman of the Equipment Availability Subcommittee, presented his report. He explained there is an urgent need to obtain still greater participation by member companies. A questionnaire will be sent out to the Prime Movers Committee members to obtain information and suggestions on how to collect and process the data so as to speed up the release of the annual report.

A report of the Fuel and Ash Handling Subcommittee was submitted by M. D. Engle, who stated that the Subcommittee agreed to reactivate the plan of issuing short reports on items of special interest in this field. Information on new equipment and new methods of operation and mainte-

nance that would be of help to other committee members is always being reviewed by this subcommittee.

Mr. Engle explained that the Fly Ash Utilization Research Project sponsored by EEI has been started by Battelle Institute. A Steering Committee will follow the project closely to see that it progresses properly.

### Metallurgy and Piping

E. H. Krieg, Chairman of the Metallurgy & Piping Task Force, reported on the progress of this group's activities. Work on many industry committees covering codes and specifications is followed by members of this task force. During the coming year, Dr. Freeman will concentrate on the organization of data essential to establish stress values in the ASME Boiler and Pressure Vessel Code specifications and the SP-5 and SP-6 research programs on austenitic steel. The task force also follows work of the Welding Research Council of the Engineering Foundation, as well as the Corrosion Research Council, to which EEI contributes. The activities of these two groups are of great importance to the industry.

The Oil and Gas Power Subcommittee circulated a questionnaire to committee members covering the use of diesel engines and gas turbines for peaking service. In reporting for the subcommittee, J. W. Blake stated the response was excellent as he summarized the results of the questionnaire.

The report of the Power Station Chemistry Subcommittee was presented by A. O. Blatter, the subcommittee Chairman. This group held its fall meeting in Baltimore, Md., Sept. 18-20, 1961, with 58 members and 18 guests present. Areas of interest that are being followed by sections of this subcommittee include corrosion, water treatment, lubrication, analytical chemistry, furnace chemistry, and by-product utilization. The Chemistry Subcommittee discussed 115 round table topics at its meeting.

### Utility Manpower

A. C. Pasini, Chairman of the Power Station Personnel Subcommittee, reported that he planned to issue a questionnaire covering number and sizes of equipment, type plants, and company organization data. This information will be used in future activities involved with studies of manning older plants for peaking and newer unit system stations. Attracting top quality engineering graduates into the electric utility industry is another subject being studied by this subcommittee.

In the absence of Mr. Lind, Chairman of the Power Station Data Subcommittee, Mr. Godfrey reported on data sheets on new plants and additions to existing stations that have been distributed to the committee since the last meeting.

P. H. Gravelle, Chairman of the Station Instruments and Control Subcommittee, mentioned that C. W. Geue of his group was studying up to date information on furnace explosions, including safety interlocks and hookups used for each installation covered, and R. S. Albright is following flame detection and observation devices. An urgent request was made of all members that full publicity be given to all incidents involving furnace explosions so that all members may benefit from the experience of others.

The report of the Turbines and Condensers Subcommittee was presented by J. M. Driscoll, the Chairman. The proposed questionnaire to serve as a basis for updating the Turbine and Boiler 1949 Overhaul Practice is to be submitted to the new members for review and further consideration. The subcommittee is studying such items as generator hydrogen piping practices and the rating of turbine generators.

J. S. Anderson and E. S. Van Nostrand serve as the Prime Movers Committee liaison representatives on the System Planning Subcommittee of the Electrical System and Equipment Committee. Mr. Van Nostrand summarized items of interest to the committee from the System Planning Subcommittee's May, 1961, meeting. J. G. Miller, the Prime Movers Committee liaison representative on the newly appointed Task Force on Direct Conversion of Energy to Electricity, reported on this subject.

The Chairman of the Stream Pollution Task Force, W. J. Robinson, reported that his group was studying existing regulations on quantity of water. He pointed out the desirability of accumulating information on temperature, oxygen content, and aquatic life characteristics of streams at plant sites.

Research projects sponsored by the Prime Movers Committee are generally carried out under the direction of steering groups or liaison representatives appointed to the appropriate committees involved in the research work.

P. H. Gravelle discussed the recent series of tests which were conducted at the Oak Creek Plant for the ASME Research Committee on Fluid Meters. G. W. Bice presented a report of the ASME Research Committee on High Temperature Steam Generation. The present test facility at Philip Sporn Plant has operated exceptionally well during the past year. The committee's program at Purdue University on the thermal conductivity of scale formed on the specimen tubes produced some interesting data this year.

A. C. Pasini discussed recent activities of the ASME Research Committee on Properties of Steam, on which he represents EEI. The operation of the rebuilt Joule-Thomson coefficient for water equipment for one week was completed and the results analyzed by the committee. New tables for the specific volume of water and a study on the measurement of the viscosity of steam are both being followed closely by this committee.

T. M. Hotchkiss and P. H. Hartung represent the Institute on the Joint Research Advisory Committee for the EEI-AEIC-Bituminous Coal Research, Inc.-sponsored program on sulphur removal from coal and flue gas contaminants control at the BCR Laboratories. Mr. Hotchkiss summarized the progress of this work.

Mr. Baker announced that H. L. Walker of the Central Hudson Gas & Electric Corp. will represent the Prime Movers Committee on the NFPA Committee, which is re-editing the present code covering dust explosion hazards.

A feature of the session on the third day was an address on engineering problems by L. M. Robertson, Manager of Engineering of Public Service Co. of Colorado.

# Meter and Service Committee Meeting

- *Review of Article 20, NEC*
- *Automatic Meter Reading Systems*
- *Hermetically Sealed Watt-Hour Meter*

**J. E. BURNEY**
*Chairman*

THE Fall Meeting of the AEIC and EEI Meter and Service Committees was held Sept. 25-27, 1961, at the Leland Hotel, Springfield, Ill. Eighty-one members, correspondents, and guests attended.

The meeting was devoted to the discussion of new developments in meters and metering equipment; development and review of joint industry standards concerning metering; presentation of subcommittee reports; and round table discussions on the engineering, economic, and operating aspects of revenue metering.

At the Monday morning session, manufacturers described and displayed new types of meters, metering instrument transformers, and metering accessory equipment. Considerable time was devoted to the description of new types of pulse generators and solid state amplifiers for use with high resolution types of printing demand meters. On Monday afternoon the four subcommittees met independently to discuss their report. H. H. Koch, Chairman of Subcommittee I, Services, moderated this session. V. P. Armour, in his capacity as Chairman, conducted the meeting of Subcommittee II, Metering. The work of Subcommittee III, Performance, was directed by its Chairman, G. F. Austin. The meeting of Subcommittee IV, Management, was moderated by Chairman W. J. Piper.

O. K. Coleman reviewed Article 230, Services, of the National Electrical Code. He said there are five factors necessary for an adequate and safe electrical service, and that no one part could be omitted without loss to the supplier and dissatisfaction to the customer. These necessary factors are adequate capacity, suitable service equipment, sufficient number of circuits, convenience of switches and outlets, and proper grounding.

Mr. Coleman explained that the National Electrical Code is fundamentally a standard developed with all interested parties represented in its preparation. It properly does not specify design, but when the facilities or load are known, the code specifies the minimum size of conductor, type of insulation, etc.

### Watt-Hour Meter as a Conductor

The watt-hour meter, usually an item of utility plant, is treated quite satisfactorily in the code. In general, it is treated as a conductor and may be installed on the line side of the overcurrent protective devices in accordance with NEC Section 203-73 and 230-94e.

Grounding is, of course, one of the important safety factors in a proper service entrance installation and is well covered in Article 250 of the National Electrical Code. Failure to interconnect the service and equipment ground could result in an exposed hazard; however, if the grounds were interconnected, the hazard would be cleared by blowing the fuse.

As part of the program on automatic meter reading, under sponsorship of J. S. Lineback, M. F. Hellar of General Electric Co.'s meter department presented a paper, "An Evaluation of Automatic Meter Reading Systems." D. E. Craig of GE stressed that this paper represented the current views of his company on this important subject, and the conclusions were the result of extensive investigation and study.

Mr. Hellar said as a result of its studies, GE has reached the conclusion that, at this time and for sometime in the future, manual reading is still the best economic solution to reading watt-hour meters. Further consideration of the economics indicates that if automatic meter reading is to become a reality it will be because of the value of the extra functions which can be performed and the increased accuracy of reading meters, rather than the economics of only automating the meter-reading function. He outlined possible added benefits that can be economically evaluated to see if such features could be used to help pay for the automatic - meter reading function. Several of the yardsticks which may be used to evaluate any meter reading system were listed as: reliability, accuracy, equipment costs, maintenance costs, operating costs, installation costs, functions performed, and promotional aspects.

Mr. Heller said in considering the economics of any automatic or semi-automatic meter reading system, GE used the value of one dollar per meter per year as an average annual reading cost. He stressed that this was a very small target. The complete elimination of this expense can justify an investment in capital equipment of eight dollars, based on a 12½ percent capitalization rate. This investment should include the purchase and the installation of the equipment, as well as operation and maintenance. In his paper, Mr. Hellar described and evaluated the economics of several sample installations.

In summary, Mr. Hellar said that GE felt that automatic meter reading is not economically feasible at present or in the immediate future, and that utilities today have other opportunities for expense reduction which have more chance of success. He said his company feels that some day the additional functions and extra data available for lower-cost system operation and control (using an approach similar to the high-

speed interrogation system) will have enough real value to justify a total system which will include the automatic meter reading function. He said they were continuing to explore and develop possible new approaches to the problem of automatic meter reading.

On Tuesday afternoon the members, correspondents, guests, and other interested parties made an inspection tour of the manufacturing facilities of the Sangamo Electric Co., Springfield, Ill.

As part of the program of Subcommittee II, W. H. Farrington described his work on the hermetically sealed-watt-hour meter. He pointed out that the popularity of selective testing plans and the possibility of long periods of time elapsing between routine meter tests in some cases had apparently increased the interest in a hermetically sealed meter. He pointed out that it might be possible to design a satisfactory sealed meter which would be physically smaller, less conspicuous, less prone to breakage, and less expensive, both in regard to initial cost and maintenance. He said the meter could possibly have a sealed and unsealed section with the latter containing the terminals, potential link if required, and surge gaps. He pointed out that it was not beyond the realm of imagination that a static meter might be developed in the future.

S. B. Vaughn reported that 2168 tape type demand recorders are presently being used for billing purposes by 33 companies, and several more are considering their use. He said most companies are using these recorders in installations above 1000 kva for billing demand. The most popular time intervals, are 15- or 30-minute, but several companies are using 5- or 60-minute intervals, and some have adopted combinations.

The terminology and nameplate data for pulse devices used in conjunction with revenue metering were described at length by E. L. Keller as part of the program of Subcommittee II. He said the transmission of a pulse as a signal to a counter, each time a particular event occurs, is a popular method of totalization. As a result of discussion, the AEIC and EEI Meter and Service Committees agreed to adopt and use the terminology appearing in Mr. Keller's report, including the use of the term "pulse" rather than "impulse."

The report presented at the 1960 AEIC convention was reviewed for the information of members by A. W. Rauth.

G. A. Palmer, editor-in-chief of the "Electrical Metermen's Handbook," reported that work on the current revision was progressing satisfactorily.

P. W. Hale informed the group that the revision of ASA C-12, Code for Electricity Meters was also progressing satisfactorily, and the various groups were in general agreement.

The remainder of the meeting was spent in discussion of presubmitted questions, as well as questions submitted from the floor.

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# Industry Leaders Discuss 1962 NEW Week

MORE than 250 electric industry leaders and media representatives met in New York recently to preview an industry filmstrip produced by *Life* magazine for the National Electrical Week Committee, and to discuss plans for the nationwide observance of National Electrical Week, Feb. 11-17, 1962.

### Industry Representatives Attend

The premiere and meeting were held at the Time & Life Auditorium. Invited were members of the NEW Committee, representing the leading electrical trade associations, electrical trade press representatives, leading electrical advertisers and other guests of *Life* and the National Electrical Week Committee.

The group was welcomed by C. D. Jackson, publisher of *Life*, and by Edwin Vennard, Managing Director of EEI. The report on National Electrical Week was presented by H. A. Webster, President of T. Frederick Jackson, Inc., and Chairman of the National Electrical Week Committee.

The filmstrip—"A New Definition of Power"—will be released to the industry for use during and following National Electrical Week. The full-color, 35mm filmstrip with accompanying sound track, is approximately 20 minutes in length. It describes the American free enterprise system and its position of world leadership to the development of the electrical industry and its allied industries. The importance of the industry is shown in terms of its significant contributions to the economy and the American consumer, past, present and future.

### Vennard Commends Magazine

In his remarks, Mr. Vennard said, "It is heartening to see this enthusiastic support by one of our great national magazines. This kind of effort in furnishing a film and promotional materials is appreciated, and it is indicative of the additional value of National Electrical Week. Electric companies will find it profitable to support and endorse the efforts and plans of NEW and the approach suggested by this *Life* effort."

# People in Power

WILLIS GALE, Chairman of Commonwealth Edison Co. for the last eight years, announced that on his recommendation the Board of Directors of the utility has elected J. H. WARD to suceed him in that position. Mr. Gale will continue in active service with Commonwealth as Chairman of the Executive Committee.

As Chairman, Mr. Ward, who will continue to serve also as President, will be the chief executive officer of the utility.

Mr. Gale said the change in top executive alignment is in keeping with the company's management development philosophy.

"It is my considered judgment," he said, "that this move is in the best long-range interest of the company. With my retirement less than three years away, the transition in responsibility for administering the affairs of the company should be effected well in advance of the completion of my active service. In the meantime, I will be here to give him such help and counsel as he desires.

"Mr. Ward, under our executive rotation policy, has directed all of the important segments of the company's activities, and is now completely qualified to assume full responsibility."

Mr. Ward joined Commonwealth in 1938 as an investment analyst. Subsequently, he served as secretary, financial vice president, and vice president in charge of engineering and commercial activities. He was elected executive vice president in 1955 and president in 1959.

During World War II he served in various capacities with the War Production Board and with the Army in Europe. He is a director of International Harvester Co., The Northern Trust Co., Union Carbide Corp., and the New York Life Insurance Co. He is a trustee of the University of Chicago.

Mr. Gale joined Commonwealth in 1937 as vice president and chief financial officer. He was elected president in 1951 and chairman in 1953. Prior to joining Commonwealth, he was with North American Light and Power Co. and subsidiaries, becoming a vice president and director in 1932.

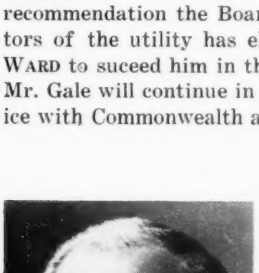
He is a director of Inland Steel Co., the Continental Illinois National Bank and Trust Co., and of Abbott Laboratories. He is a trustee of Northwestern University, Presbyterian-St. Luke's Hospital, and the Museum of Science and Industry.

Also at Commonwealth Edison, Nicholas Galitzine, Assistant to the Chairman of the company since 1950, was elected a Vice President. Mr. Galitzine has been with Commonwealth Edison since 1923, serving in various sales and administrative capacities.

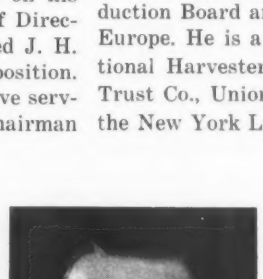
Mr. Galitzine has combined his busines activities with a vigorous role in Chicago civic and welfare affairs. He is currently vice chairman of the 1961 Crusade of Mercy. He is a vice president and director of Passavant Memorial Hospital, and a director of the Lyric Opera of Chicago and the Chicago Better Business Bureau.

In past years he has been associated in numerous capacities with the Community Fund and the Joint Appeal. He is a past president of the United Charities of Chicago, and was chairman of the Chicago Civic Committee for World Refugees,

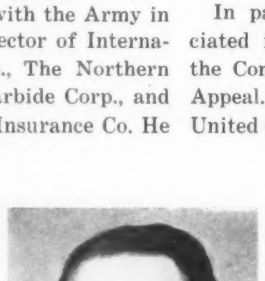
Mr. Galitzine joined Commonwealth the same year he arrived in America. Born in Russia, he came to this country from England.



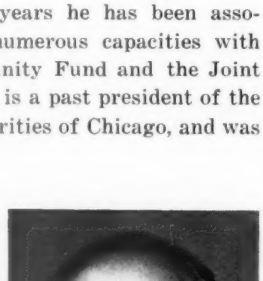
J. H. WARD



WILLIS GALE



D. C. COOK



PHILIP SPORN

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D. C. COOK, Vice President of American Electric Power Co., has been elected President and chief executive officer of the company. He succeeds Philip Sporn, who retired as President and chief executive officer at age 65 on Dec. 1.

In addition to being a vice president, director, and member of the Executive Committee of AEP, Mr. Cook also was Executive Vice President—Legal, Finance and Accounting—of the American Electric Power Service Corp., the service organization of the AEP system. Mr. Cook was also elected President and chief executive officer of the Service Corp.,

and President of AEP's six operating companies.

The parent board at the same time established a new standing committee, the AEP System Development Committee, and appointed Mr. Sporn as its Chairman. In addition to his duties in this assignment, he will continue to serve as a director and member of the Executive Committee. He will also serve as advisor and consultant to the directors and officers of the company, in accordance with an arrangement entered into with the company in 1959.

The AEP Service Corp. also elected H. A. KAMMER, Executive Vice President, Engineering and Construction, as Senior Vice President.

Mr. Cook, who is a former chairman of the Securities and Exchange Commission, joined the AEP Service Corp. in 1953 as vice president and assistant to the president, and was elected its executive vice president for legal, finance and accounting in 1954. He was elected a director of the parent company in 1960, a member of the parent board's Executive Committee in 1960, and a vice president of the parent company in 1961. In addition, he has also been a vice president and a director of each of the AEP system's six operating utility companies and a director of the Service Corp. He will be the fifth president in AEP's 55-year history.

He received his bachelor's and master's degrees in business administration from the University of Michigan, and the degrees of juris doctor and master of laws from George Washington University in 1939 and 1940, respectively. He is also a certified public accountant.

Mr. Cook was a member of the staff of the SEC from 1935-1945, the last seven years of which were served in its Public Utilities Division, where he was assistant director. He was special counsel to the House Committee on Naval Affairs from 1943-1945; executive assistant to the U. S. Attorney General from 1945-1946; and director of the Office of Alien Property, Department of Justice, from 1946-1947. From 1947 to 1949, he practiced law as a partner in the Washington law firm of Cook and Berger.

He returned to government service in 1949 when he was appointed by President Truman as a commissioner of the SEC. He was elected vice chairman of the SEC in 1950, and chairman in 1952. From 1950-1952 he also served as chief counsel to the Preparedness Investigating Subcommittee of the Senate Armed Services Committee.

Mr. Cook is a member of the President's Committee on Equal Employment Opportunity, a trustee of the Center for Advanced Study in the Behavioral Sciences (Stanford, Calif.), and a member of the American and Michigan Bar Associations, American Judicature Society, American Accounting Association, American Institute of Certified Public Accountants, Theta Xi Fraternity, and the National Capital Democratic Club. He is a past director of EEI.

Mr. Sporn, internationally known electrical engineer, has been associated with AEP since 1920, and has been president of the parent company and all of its subsidiaries since 1947.

Starting as an assistant engineer, he became chief electrical engineer in 1927, and chief engineer in 1933. Since that time, he has led the AEP system's extensive technological pioneering work in electric generation, transmission and distribution, and its years of promotion of the total electric concept in every phase of modern living, business and industry.

He has devoted much time and effort to nuclear energy and its application in power generation. He has participated in a number of committees and groups studying atomic energy, both industrial and governmental. He is a former president of Nuclear Power Group, Inc., and has been chairman of the Research and Development Committee of the East Central Nuclear Group, Inc., since its formation in 1958. He was instrumental in the formation of Ohio Valley Electric Corp., an organization of 15 private electric utilities providing electric power to the AEC's Portsmouth (Ohio) Project, and has been its president since 1952.

R. L. PULLEY

Mr. Sporn has been active as a consultant and advisor to various Federal agencies and educational institutions, as well as to private and governmental agencies in several foreign countries, including Israel. Among his many posts, he has been a trustee of the Committee for Economic Development, member of the Board of Governors of Weizmann Institute of Science, director of The Advertising Council, and director of EEI.

He is a 1917 engineering graduate of Columbia, has authored two books and hundreds of technical papers and articles, and has received numerous engineering honors, including the important Edison and John Fritz Medals. He also is the holder of many honorary degrees.

The 1,100,000 - kilowatt Philip Sporn Plant on the Ohio River at New Haven, W. Va., one of the world's largest steam-electric power stations, is named in his honor.

Mr. Sporn was born in Austria, brought to the United States as a child by his parents, and naturalized in 1907.

Mr. Kammer is a 37-year veteran with AEP. He rose from assistant design engineer to chief of design and construction in 1947, was elected a vice president of the AEP Service Corp. in 1950, and executive vice president for engineering and construction in 1953. He, too, is a director of AEP and of the Service Corp.

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R. L. PULLEY, Vice President and General Manager of Gulf Power Co., has been elected President of the

company, succeeding L. T. SMITH, JR., who has retired.

A graduate of Alabama Polytechnic Institute with a degree in electrical engineering, Mr. Pulley joined Alabama Power Co. in 1922 as an apprentice engineer. In 1925 he joined Gulf Power as an engineer, and in 1935 was promoted to chief engineer. In 1947 Mr. Pulley was named operating manager, and in 1951 was elected vice president. He was appointed general manager in 1960. In 1958 Mr. Pulley became a director of Southern Services Inc., a service company affiliated with five southern companies.

A registered professional engineer in Florida, he is a member of the Florida Engineering Society, and is a Fellow in the American Institute of Electrical Engineers. A past chairman of the Pensacola-Mobile Subsection of AIEE, Mr. Pulley is a director of Southeastern Electric Exchange, director of Junior Achievement, and director and vice president of the Greater Pensacola Chamber of Commerce.

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J. F. FAIRMAN, Senior Vice President of Consolidated Edison Co. of New York, Inc., has been elected President of United Engineering Trustees, Inc., organization of the five "Founder Societies."

He is one of the engineering profession's most distinguished figures in the nation, has received many high honors, and is a leading authority in the field of nuclear power.

Mr. Fairman, whose term is for one year, succeeds W. F. Thompson of New Haven. United Engineering Trustees, Inc., which owns and operates the United Engineering Center, is composed of the American Society of Civil Engineers; the American Institute of Mining, Metallurgical, and Petroleum Engineers; The American Society of Mechanical Engineers; the American Institute of Electrical Engineers, and the American Institute of Chemical Engineers.

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A. L. CLARK, Personnel Manager, Virginia Electric and Power Co., has been elected Vice President of the company. He replaces H. A. Hitch, who has retired.

Mr. Clark joined VE&P in 1928. He attended the University of Richmond School of Business Administration prior to joining the company.

He became district accountant at Suffolk in 1936, and came to Richmond as supervisor of general accounting and pay roll in 1937. In 1945, he was appointed chief accountant, and in 1951, became director of auditing and procedures. He was made assistant treasurer in 1953, and personnel director in 1956. He became personnel manager in 1958. Mr. Clark is vice chairman of the Southeastern Electric Exchange's Employee Relations Committee, and a member of the Employee Relations Committee of EEI.

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J. H. FOOTE, Chief Engineer, Commonwealth Associates, Inc., has retired. He will continue his association with the firm on a consulting basis.

Following graduation as a civil engineer from Michigan State University, Mr. Foote's first employment was as a field engineer with companies now associated with Consumers Power Co. Upon organization of Commonwealth and Southern Corp., he was given responsible charge of electrical engineering services for its northern group of companies.

In 1949, following dissolution of Commonwealth and Southern, Mr. Foote was a leader in organizing the present affiliated Commonwealth Services of New York and Commonwealth Associates of Jackson, Mich. He was president and chief engineer of Commonwealth Associates from its organization until his resignation as president in 1958. He has also been an officer and director of New York Commonwealth Services Inc.

Throughout the years Mr. Foote has been very active in EEI committee affairs and has given generously of his time to the interests of the industry as a member of the Engineering Division Executive Committee, and a member and past chairman of the Electrical System and Equipment Committee. He has served as an EEI representative on numerous joint industry committees, concerned not only with equipment, but also with such basic matters as preferred system voltage ratings.

His leading role in the development of engineering has been nationally and internationally recognized. In 1959-60 he was national president of the AIEE, after having served as a vice president and director.

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The election of P. G. WHITMORE as a Vice President of Middle South Utilities, Inc., has been announced.

From 1929 until joining Middle South, Mr. Whitmore served as an engineer with Ebasco Services Inc. In 1942 he was assigned to Middle South system subsidiaries, with the responsibility of coordinating all system planning, construction, design, operating, and similar engineering work between these companies and Ebasco. He has served as secretary of the Middle South System Operating Committee since 1945.

Mr. Whitmore was graduated from the University of Arizona as an electrical engineer in 1923. Following graduation, he joined Westinghouse Electric & Manufacturing Co., as a transformer tester. In 1924 he joined West Penn Power Co. in the distribution engineering department, where he was employed until joining Ebasco.

As a vice president of Middle South, Mr. Whitmore will represent the company on matters concerned with system engineering and construction.

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NEILL RICHARDS, Secretary-Treasurer and a director of Kansas Gas and Electric Co. since June, 1944, has been elected a Vice President of the company.

Mr. Richards is a veteran of more than four decades in the public utility industry. He began his career in 1919 with the Interstate Power Co., and later was its treasurer. He also had been assistant treasurer of Utilities Power and Light Corp. in Chicago.

During World War II he left the utility field briefly to become an administrator and business consultant in the office of the Alien Property Custodian.

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